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EAST AFRICAN NATURAL HISTORY SOCIETY BULLETIN

NOTICE

Please note that with effect from this issue (March 1986 issue), the EANHS Bulletin will come out in numbered sequences. As there are six issues published in a year, the issues will carry numbers 1 - 6.

Similarly, all the 1986 issues will come out as Volume 16.

The publishers inted to continue with this arrangement until further notice.

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EANHS BULLETIN Volume 16 (1) MARCH 1986

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SOME INTERESTING SWALLOWTAIL BUTTERFLIES FOUND IN CITY PARK

Since 1976 I have made six visits to Kenya during which I have collected certain species of Swallowtail butterflies, mainly in the City Park in Nairobi. The purpose was to obtain live specimens for scientific research. The work involves the breeding of butterflies and most of this is carried out in England by Sir Cyril Clarke, F.R.S., at the Department of Genetics, Liverpool University, and at his home in West Kirby. Professor G.M.O. Maloiy, Principal of the College of Agriculture and Veterinary Sciences, University of Nairobi, very kindly organized my visits and in 1983 set up a temporary breeding unit in the Department of Animal Physiology at Chiromo.

Sir Cyril Clarke has been investigating the inheritance of wing patterns in many species of butterflies, including the African mimetic Swallowtail *Papilio dardanus* (the "Mocker") and *P. phorcas* ("Green-patch Swallowtail"). In 1974 Sir Cyril was able to cross these two species and the hybrid offspring obtained were *P. nandina*. *P. nandina* was first described by Rothschild and Jordan in 1901 after two previously unknown males had been caught on the Escarpment in 1900. Three other specimens, all males, are known, two caught in Uganda and one at Karen, Nairobi. Dr. R.H. Carcasson had suggested that *nandina* might be a hybrid between *dardanus* and *phorcas* and it was Sir Cyril Clarke's work which confirmed this. Sir Cyril hand-paired a female *dardanus* to a male *phorcas* and the mating produced four male *nandina* and one female.

During my last visit to Kenya, in February 1984 it was exciting to catch a male *nandina* in the City Park. The City Park is about 2½ miles from the centre of Nairobi and covers an area of approximately 300 acres, originally indigenous forest. More than half this area has been preserved as forest, the remainder being laid out as lawns, walks and flowerbeds. The forest trees are mainly *Teclea* on which *dardanus* and *phorcas* butterflies lay their eggs and on which the larvae feed. The cultivated flowers provide a good source of honey for the adult butterflies so the park is an excellent locality for observing these butterflies. It was by kind permission of Mr. Kurai, the City Park Superintendent, that I was allowed to catch some specimens for breeding purposes.

During my visits I and my assistants usually spend from 10 a.m. to 2 p.m. in the park, 3 days each week. As my 6 visits have been of 2 or 3 weeks' duration I have been observing City Park Swallowtail butterflies for approximately 200 hours. Since February 1984 my assistants, Mr. Daniel Alliangana and Mr. Stephen Wanyee Kinuthia spent at least another 100 hours in the park.. None of us has seen another *nandina*. I should mention that we only catch males when they are needed for mating to our live females. As a general rule, when wild females lay, their eggs are always fertile. However, males may be required for mating to bred virgin females and, when necessary, for remating to wild females. Details of my catches of female *dardanus* and *phorcas*are shown in Table 1.

THE CAPTURE OF *P. NANDINA*, FEBRUARY 1984

The specimen was caught by Mr. Stephen Kinuthia during my last visit. February 1984 had not been a particularly good time for *dardanus* and *phorcas*. We had already visited the park four times and had caught 5 female *dardanus* and 7 female *phorcas*. We hunt for females under the trees, they do not normally fly in the open, whereas males do, and males can generally be found flying in sunlit patches between the trees. It was in such a place that Stephen saw the *nandina* male and as he thought it was an unusually pale *phorcas* he caught it and brought it to me in his net. Having seen Sir Cyril's bred *nandina* I realized it was not *phorcas* but *nandina*. Mr. M. Clifton of the National Museum of Kenya confirmed this. Stephen had thought

TABLE 1 SOME *PAPILIO* FEMALES CAUGHT IN THE CITY PARK, NAIROBI

Date of visit	female *phorcas*				female *dardanus*				Other *Papilio* species of particular interest
	green male-like	f. *mutans* (possible)	f. *thersander*	percentage of females which laid	f. *hippocoonides*	f. *cenea*	f. *poultoni*	*percentage of females which laid*	
16.2.76 to 28.2.76	12	1	1	50%	4	5	2	82%	♀ *P. rex* ♂ *P. rex*
27.1.80 to 17.2.80	15	7	5	50%	4	2	1	43%	♂ *P. ophidicephalus* ♀ *P. mackinnoni*
8.2.81 to 24.2.81	14	6	2	82%	1				♀ *P. rex* 2 ♀♀ *P.escherioides*
19.4.83 to 1.5.83	12	0	3	67%	1	2		67%	8 ♀♀ *P. jacksoni* (5 of these laid ♀ *P. ophidicephalus* (laid)
20.2.84 to 4.3.84	10	1	2	27%	7	1	1	75%	♂ *nandina*

NOTE Female *phorcas* recorded as f. *mutans* were of the green male-like wing pattern in which the green colour was replaced by a golden or pale yellow, they may have been faded specimens.

it was *phorcas* rather than *dardanus* not only because of its size and greenish tinge but also by its mode of flight. *P. phorcas* males are faster and more vigorous in flight than *dardanus*. *P. dardanus* males have a rather "floppy" flight and are easier to catch and are, of course, pale yellow whereas *phorcas* are bright green. However, yellowish *phorcas* are sometimes seen. I was able to hand-pair the *nandina* male to two *dardanus* females but the females did not lay.

THE CAPTURE OF *P. OPHIDICEPHALUS*

During my February 1980 visit one of my assistants, Mr. Christopher Kamwaro, caught a large male Swallowtail feeding on flowers in the City Park. It was identified by Mr. S.C. Collins as *P. ophidicephalus*. In April 1983 Mr. Thomas Macharia caught a female *ophidicephalus* also feeding on flowers quite close to the car park in the City Park. It was identified by Mr. M. Clifton who was surprised that it had been found in Nairobi. As we had also caught a male 3 years previously he thought that a breeding colony had become established in the park.

The female *ophidicephalus* laid readily on *Clausena* and *Citrus* both in Nairobi and in England. She lived for 14 days and laid over 100 eggs. Sir Cyril was able to raise a brood of butterflies, the larvae being fed on *Citrus*.

OTHER *PAPILIO* SPECIES OBSERVED IN THE CITY PARK

Many specimens of *P. nireus* and *P. demodocus* were seen on each of my visits. Three *P. rex* females were caught but none laid. *P. escherioides* females were seen on two of my February visits. Eight *P. jacksoni* females were caught in April 1983, during the short rains, and most of these laid on *Teclea* and the larvae ate *Citrus*. I did not see *jacksoni* females during my February visits. *P. mackinnoni* were seen during four of my visits and a female was caught, but they were not common.

NOTE ON THE REARING OF *P. NANDINA* BY SIR CYRIL CLARKE, F.R.S., IN ENGLAND AND BY MR. S.C. COLLINS IN KENYA

P. dardanus will lay on *Choisya ternata* which grows outdoors in England and on *Citrus* which is easy to grow under glass and the larvae can be reared on both. However, *P. phorcas* females need *Teclea* to lay on and their larvae cannot be successfully reared on *Citrus* or *Choisya*. *Teclea* is very slow to grow in our greenhouses in England and for this reason we asked volunteers to breed *P. phorcas* in Kenya. From 1980 to 1983 Mr. S.C. Collins very kindly did this for us and he was able to raise many *nandina* broods for us as well as pure *phorcas*. Together with Sir Cyril's *nandina* broods reared in England totals of 337 males and 207 females have so far been obtained. The females are of great interest as several different forms occurred in the broods, depending on the form carried by the *dardanus* parent. In Kenya there are at least three different mimetic forms of female *dardanus* and each of these three forms has been recognized in *nandina* females. There are two common forms of female *phorcas*, a green male-like form and a yellow and brown (*thersander*) form. Neither form could be recognized in their *nandina* offspring and the offspring from green females were the same as those from *thersander* females. All broods containing female *nandina* as well as males have been from F1 matings, i.e. female *dardanus* x male *phorcas* and female *phorcas* x male *dardanus*. F2 matings i.e. *nandina* x *nandina* have so far proved to be infertile and only one back cross mating, female *dardanus* x male *nandina*, done by Mr. S.C. Collins, has produced offspring. All were males and were similar to F1 males.

Sir Cyril Clarke is continuing the breeding work in England and is being helped in Nairobi by Miss P.M. Allen, P.O. Box 14166, and by Mr. D.M.I. Alliangana, Senior Technician, Department of Animal Physiology, Nairobi University. We would be grateful to hear from anyone interested in the research work. We are particularly anxious to hear from anyone who thinks they may have seen a female *nandina* either flying wild or in a collection.

The research is financed by a generous grant to Sir Cyril Clarke from the Nuffield Foundation.

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Alison Gill, Tideway, The Warren, Mapledurham, Reading, U.K.

The photos are filed in the Entomology Department, National Museum.

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NSENENES MAKE IT BIG IN KAMPALA

It was Derek Pomeroy who, during November 1984, pointed out to me that the last three weeks or so had been remarkable in the immensity of the numbers of flying insects in Kampala and particularly on Makerere Hill. These are the bright green katydids or long-horn grasshoppers, *Homorocophus nitidulus*, locally known as NSENENE. Since the beginning of time the Baganda have caught and eaten these creatures. When properly prepared they are delicious. Normally, they are pan-fried after removing the legs and wings. The final result is not unlike potato crisps or fried shrimp.

The night we arrived in Kampala thirty years ago there were people all around the lights at Makerere after dark and I went outside and asked them what they were doing. They told me they were catching nsenenes and so I joined them. After catching about twenty or so I took them inside and asked the cook at the guesthouse to prepare them. Soon, I had before me a steaming bowl of greenish-yellow water with floating bodies and legs. I assumed this was the national dish so I dutifully tried to get it down. I must admit that after a few spoonfuls I gave up. I found the legs just too much! In fact, the whole thing was a pretty tasteless mess. Only later did I learn that the cook was not a Baganda and had no notion of how I, as an American, wished them prepared, so he did them as he thought I would like them done.... stewed in their own juice!

For the previous couple of weeks as one drove in the gate and climbed the hill onto the Makerere campus the first thing one noticed was that there were hundreds of men, women and children, mostly the latter, falling over one another as they ran after flying nsenenes, some of the children climbing in trees and shaking them down, while others stood below looking up, then ran after the flying insects, knocking them down with switches made of a piece of branch with a few leaves attached. They were so intent on their business that they paid little heed to the traffic coming and going on the hill and were really a bit of a hazard. Most people were bent over, looking in the grass and shaking bushes for the nsenenes, which seemed to be everywhere.

The hill had become a mecca for birds, attracted to these delicacies. Dr. Pomeroy gave me a list of the birds that he observed capturing the insects. It included Pied Crows, Kites, Common Bulbuls, Black and White Casqued Hornbills and several others that I have forgotten. He did mention seeing a Tawny-flanked Prinia and a Red-faced Cisticola both attempting unsuccessfully to capture nsenenes, also a Grey-headed Sparrow which one thinks of as being primarily granivorous, however, most birds are opportunistic when a situation such as this presents itself.

It is a ludicrous sight seeing the huge Black and White Casqued Hornbills flycatching after insects. I have not seen them capturing nsenenes, but I have watched them on several occasions flycatching spiralling clouds of termites as they emerge from the ground. They fly about, crossing and recrossing the swarm of termites, and suddenly brake in mid-air, open their immense beak and close it with a loud CLOP on a termite. Grey hornbills, and I presume most if not all hornbills, do the same thing. The kites are fascinating in the way they capture flying insects. They fly towards an insect and at the last moment throw their tail forward and clap their wings together so that the insect is actually blown into their breast feathers, hitting the breast, and at the same instant the feet come forward and grasp it before transferring it to the beak.

Dr. Denis F. Owen, a former Makerere University Zoologist, now at Oxford Polytechnic, has written extensively on insect ecology and distribution. He collected a random sample of about 10,000 nsenenes at Kampala and discovered that there were six colour morphs. Green was about twice as common as the next most common colour, which was brown, and these two made up 97% of the sample. The remaining four patterns, comprising only 3% of the sample, were either green or brown with purple stripes or purple heads. I mentioned that birds may be opportunists; biologists too may at times become opportunists, as was Dr. Owen when he collected 10,000 nsenenes in order to do his researches on colouration. Opportunities of this kind do not occur every day. The chances of finding 5 nsenenes with brown bodies and purple heads or the even smaller chance of finding 2 brown nsenenes with purple stripes are very remote, except when such large populations are sampled.

It is difficult to resist the chance of remarking that although most Europeans would 'gag' at the thought of eating nsenenes, i.e. "grasshoppers", these same people fully enjoy eating shrimp or lobster, all of which are arthropods. Food prejudices, and indeed all other prejudices, are interesting in their inconsistencies. The famous American zoologist-arachnologist, an authority on spiders, Dr. Petrunkevitch, once ruefully remarked that most people disliked spiders intensely and, when asked why, they invariably said because they hated their long hairy legs. These same people, he said, seemed however to greatly admire his hairy, long-legged Russian Wolfhound.

John D. Goodman, San Bernardino County Museum, 2025 Orange Tree Lane,
Redlands, California 92373.

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FRIGATEBIRD AT NAIVASHA ?

On Sunday October 27th 1985 at 10.15 a.m. at Lake Naivasha, while waiting on the landing stage at Mr. Higgins' farm to go across to Lotus Island, we saw a large unfamiliar bird circling amongst the pelicans overhead. It came down and skimmed the water fairly close to us, before gliding up again and moving off over Lake Naivasha towards the west. It was a large black bird with marked backward bending slim wings which appeared to have a greater span than that of the pelicans. It had a long forked tail, a white head and white underparts.

It was totally unfamiliar to all of those in our party, and so we consulted our various bird books. In Collins "The Birds of Britain and Europe with North Africa and the Middle East" by Heinzel, Fitter and Parslow, we found exactly what we had seen in the illustration of the female frigatebird with the exception of the white head, which in the text describes the immature bird.

As an amateur bird-watcher I would like to know whether anyone more knowledgeable than I saw the bird, whether it could have been a frigatebird, and could it possibly have been blown so far off course? Has a frigatebird ever been seen there before?

There did appear to be a larger concentration of pelicans in that area than had been seen recently, with a fairly large proportion of immature birds among them.

Rosemary Charles, Box 40426, Nairobi.

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A MYSTERY GULL AT MALINDI

Around the tenth of October 1985 a group of gulls was observed standing at the water's edge in Malindi Bay. Not being used to Indian Ocean gulls I made mental notes, intending to look them up later. The majority of the group were around thirty typical Sooty Gulls *Larus hemprichi*, but one was clearly different. The birds were observed from about fifty feet with x7 binoculars in good light.

The odd bird was a rather smaller, white gull with a dark hood and white eyelids. The hood was grey rather than black and extended from the mid-crown to the nape and to the eyes. The rest of the head was white with the eyelids conspicuously white. The back and wings were grey with black and white tips showing on the folded wings. The underparts were white, as well as the tail. The bill was much less massive than that of the Sooty Gulls, black with a small but conspicuous blood red tip. The legs looked delicate and were black.

In flight the upper wing was grey, not particularly dark or light - like a Common Gull perhaps, and the tips of the primaries were black without, as I recall, white "mirrors", giving the rear outer edge of the wing a black margin. The underwing was not noticed.

There was nothing striking about the bird's shape standing or in flight.

Clearly this was not a Sooty Gull or the similar White-eyed Gull *Larus leucophthalmus*. It must therefore have been something unexpected.

The closest matching description I can find is that of the seemingly improbable Franklin's Gull *Larus pipixcan*.

This has a similar hood and the eye as well as the bill and leg colours. However, Franklin's Gull is said to have a stout bill, has "mirrors" on its wings and is rather smaller.

So what was it?

R. Ashford, Liverpool School of Tropical Medicine, Liverpool L3 5QA.

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TWO POSSIBLE BREEDING RECORDS OF THE MADAGASCAR BEE-EATER *MEROPS SUPERCILIOSUS* IN KENYA

In view of the paucity of breeding records for the Madagascar Bee-eater in Kenya, I would like to report an apparent breeding colony in Meru National Park seen over the weekend of 19-22 October 1985.

We drove south to Adamson's Falls, then proceeded west along the track which skirts the Tana River. After some way the track ceased to exist, as the bank had collapsed into the river. At this point we got out of the vehicle to identify another route which would join up with the one we intended to return by. During this short break, we noticed a group of some 40 Madagascar Bee-eaters on the river bank, and on closer inspection found that they were entering and leaving holes in the bank. Roots and branches hanging down provided ample perches, and we observed several young sitting on these being fed by adult birds. The young could fly, but did not cover great distances, and their plumage was definitely immature. From time to time two of the young would leave their perch, take a quick spin around and then return to the perch: they were not seen to catch any insects, and it appeared that the parent birds were still providing full time.

We observed these Bee-eaters for some 20 minutes, and got to within 6 feet of them. Weather was hot, dry and conditions were perfect.

On another occasion, we saw what appeared to be breeding Madagascar Bee-eaters at Kibwezi, downstream from Bushwhackers some 4 km. west of our plot on the Athi River on 22/23 September 1984. The river was very low and we were walking along the river bed. We came across a substantial sandbank with several holes in it. We watched for some time, and saw that Madagascar Bee-eaters were entering and leaving the holes. We do not recall seeing any young, and did not notice whether the adults were taking food into the holes. We have not been back to the sandbank again because the river has since risen considerably. It is more than likely that the sandbank was washed away or at least drastically altered by flood water.

Jean Hartley, P.O. Box 14098, Nairobi.

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REVIEWS

MONGOOSE WATCH. By Anne Rasa, 1986. London: John Murray. Local agents: Evans Bros. U.K. price £10.95.

Anne Rasa, MS, PhD, Dr habil, is a highly qualified academic. For more than fifteen years she has researched the biology of the dwarf mongoose, the well-known and much loved 'kiteti' that has been a pet in many East African households. Her work started with captive animals at the Max Planck Institute, West Germany. However, one can go only so far with captives and there comes a point when what one has learned in the laboratory has to be compared with wild, free-living specimens. Amme Rasa thus undertook several years of studying wild dwarf mongooses on Ray Mayers's Rukinga Ranch and in nearby Tsavo East National Park. This field work centred on one mongoose family led by its matriarch, Diana, and her consort, George. They form the base of this book, hence its sub-title 'A Family Observed'.

Mongoose Watch is not an academic treatise and was written for layfolk. It is readable, uses a minimum of technical jargon, and while light on the mind, is informative. I envy Professor Rasa her easy style. She is pointedly anthropomorphic when interpreting what she observes, but in a manner that improves her results. Revealing her own warmth, she gains the reader's sympathy without being 'schmaltzy' or unscientific.

The book tells the story of Diana and George's family, how they survive in a hostile environment, their 'friendships' with hornbills who act as sentries for the family, encounters with 'enemies' - snakes and birds of prey, of battles with rival mongoose bands, births, deaths, upbringing and a great deal more besides. Anyone reading it will acquire a sound knowledge of these highly intelligent and interesting little mammals.

Criticism? While undoubtedly the mistress of her subject, Anne Rasa isn't quite "au fait" with the behaviour of other mammals such as impala, upon which she passes occasional comment. And she overdoes it a bit when describing the rigours of life in the bush. Her occasional claim that the only other mammal sharing certain social traits with her mongooses is man, doesn't ring quite true: one suspects that her involvement with her subject has endowed them with slightly too rosey a hue. But these are minor criticisms. Of more substance, she obviously knows so much more about dwarf mongooses than is in the book that I felt slightly cheated (but then maybe I'm too greedy).

Mongoose Watch is a book suitable for anyone with an interest in wildlife between the ages of thirteen and their dotage. I commend it highly.

Ian Parker.

THE MAMMALS OF ZANZIBAR AND PEMBA ISLANDS. By R.H.W. Pakenham, 1984. Available from the author, 9 Kirkwick Ave., Harpenden, Herts. AL5 2QU, England. U.K. price £6.

This paperbacked, ring-bound paper was published privately by the author and serves to update a checklist of the land vertebrates of these islands that he co-authored with R.E. Moreau in 1942. In recent years, he has also published checklists of amphibians, reptiles and birds.* The introductory section includes brief discussions of the topography and climate of Zanzibar and Pemba, along with useful outline maps of each. Sections on breeding seasons (probably the weakest), distribution and endemism, and conservation complete the introduction. This is followed by a list of species, with scientific and common English names, and the body of the work, an annotated checklist. The author seems to have carefully researched current taxonomy of mammals and sifted authenticated from unauthenticated records of occurrence. The paper concludes with a list of about 100 references and an index to scientific names. A reliable checklist can be extremely useful to students of zoogeography, and I believe this one meets that criterion. Species accounts are written in an anecdotal style, nevertheless there are useful bits of information, such as local Swahili names for some species. One might argue that the price of the paper is too high, but printing costs have continued to rise, and until another such publication appears, students of mammal zoogeography in this region will have no alternative.

*Pakenham, R.H.W., 1983. The Reptiles and Amphibians of Zanzibar and Pemba Islands. *Journal of the East Africa Natural History Society and National Museum* No.177.

J. Hebrard.

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NDUTU REVISITED

Having written in the last issue of the *Bulletin* that now is the time to visit Tanzanian parks, I heeded my own advice, organised a plane full of friends and went back to explore further. We had a free weekend before a conference in Arusha. We flew to Ndutu on Lake Laria in the south-eastern corner of the Serengeti Plains.

The last time I was there was in 1970 when George Dove presided and served at the bar under the picture of Figan, the chimpanzee of the Gombe Stream reserve. At that time Ndutu was an exclusive camp. There were half a dozen aircraft on the airfield and at the bar you could mingle with the safari set. *Innocent Killers* was being written next door. Ndutu was just a hop from New York, via London and Nairobi - and the third world was far away.

Well, Ndutu is still there. The airfield is serviceable although much driven over. There had been no aircraft seen at Ndutu for some time. We were greeted as harbingers of resurrection. The camp has recently been purchased by the Kullanders of Gibbs Farm and is in the process of being rehabilitated; this really translates into being rebuilt. There is hot water, cold beer, clean rooms, friendly staff and simple but good food. So what more does one need? There are also game, birds and space and Oldeani presides over the eastern horizon. It is like it was before the safari set discovered it.

We saw a hundred thousand wildebeeste and perhaps just as many gazelle. At the lake, on the grasslands and further west on the kopjes there were lions everywhere. There were hundreds of spotted hyaena too. However, there were no bat eared foxes, no hunting dogs and much fewer jackal than I remembered. Did anyone work on the decline of these species?

Around the camp there were large flocks of Fischer's lovebirds and some two dozen species of starlings, weavers, sparrows, doves and hornbills are tame enough to sit at the bird table. At dinner we were visited in the dining room by some six genet cats.

We had a splendid time at Ndutu and were wondering about its future. Will it be possible to walk the tight-rope between the abyss of maximized tourism business and neglect? Ndutu should be a naturalists place. It deserves support!

Although now is the time to visit the parks in Tanzania avoid Arusha if possible. Its hotels are a showcase of what happens to the parastatal mind. In the Mount Meru Hotel we were robbed of some $60 a day. I did not mind that the telephone did not work or that there was only one light bulb, and that we were given just one torn towel. I was prepared for poverty and all I wanted was a clean bed, water and a flushing toilet. I was prepared for what is called 'the lack of managerial skill' too, so I was not surprised to be shown first three rooms which were either already occupied, unserviceable or not made up. I did not even mind eating a poorly prepared breakfast from chipped plates, or to find that in the cafeteria only three of the twenty items listed on the menu were available.

What I did mind was the indolent, unfriendly and hostile attitude of the staff at the reception desk and the cashier. We were made to feel that it was a privilege to be admitted at all. We, the 60 dollar a day guests stood about the reception desk like supplicants, while the staff engaged in the various activities of their private affairs. I also did mind when the hot water tap burst off the wall and super-heated steam filled my room and when I went to report the matter to the receptionist for the third time, she yawned and said "you people always complain, you should be glad there is hot water" !

Lastly, a message to the Director of the Tanzanian National Parks: By all means charge the visitor a reasonable sum so that the parks can be maintained and protected; but is it reasonable to ask four Kenyans who want to spend the last two hours of daylight in the Arusha Park to pay $120 because they drive in a foreign registered car? Surely such inflexible pricing must be counter productive!

Imre Loefler, Box 47964, Nairobi.

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IMPORTANT NOTICE : ANNUAL GENERAL MEETING

The Annual General Meeting of the Society will be held on Monday 12 May 1986 in the Ford Foundation Hall of the National Museum, Nairobi.

Nominations for Office Bearers and Members of the Executive Committee as well as notices of matters to be included in the Agenda should be sent to the Secretary, Box 44486, Nairobi to reach her before 15 April.

Members who are prepared to serve on the Committee, either as nominated or co-opted members, are requested to inform the Secretary without delay; anyone willing to volunteer will be most welcome.

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EAST AFRICA NATURAL HISTORY SOCIETY

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This is a duplicated magazine issued six times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (EANHS Bulletin), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

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BULLETIN

A publication of the East African Natural History Society, Box 44486, Nairobi, Kenya. Price 10 shillings.

EANHS BULLETIN Volume 16 (2) June 1986

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CONVERGENCE IN OLD WORLD AND NEW WORLD BIRDS

Those who haved lived in or visited both the Old World and New World have had the opportunity to observe many examples of convergent evolution of both plants and animals where different orders, families or genera that occupy similar ecological niches exhibit amazing similarites. One of the best illustrations among plants is the close similarity between the cactus family (entirely, or nearly all New World, though widely introduced) and the euphorbia family, many of whom in the Old World look almost identical to some cacti, so nearly alike that unless the flowers are present (which are totally different) it is often difficult to decide to which family the plant belongs. A familiar sight when travelling the Inter-American Highway from Southern Mexico to Panama are the "Umbrella trees" (*Cecropia*). In tropical Africa this tree is duplicated by another tree *Musanga cecropioides* with the same umbrella-like compound leaves and symmetrical shape.

There are many examples of such parallels in Old and New World birds. Those of us who first learned birds in the New World and come to East Africa soon discover that in addition to the enormous number of entirely new birds there are some that look much like those we are familiar with. Sometimes this is because they are close relatives, in the same family or genera, but more often than not this does not happen to be true. Usually, they are in completely different families and even in different orders. A very common bird of East Africa in open country is the Yellow-throated Longclaw. It belongs to a family that includes wagtails and pipits (Motacillidae).. Birders from America will immediately be struck by the close similarity of this bird to the American Meadowlark. Both have streaked brown backs, yellow breasts with a black V-mark on the chest, white outer tail feathers and rather long, slightly curved beaks, The resemblance is so close that it is doubtful if it is purely coincidental. The Meadowlark belongs to an entirly New World family (Icteridae) that includes New World blackbirds, grackles, casiques, New World Orioles (not true orioles), cowbirds and a few other birds, mostly tropical. New World birds in this family, Icteridae, seem to occupy niches that are filled by birds of various other families in the Old World. A common bird of wet, swampy places, the edges of ponds etc., in the New World is the Redwing Blackbird, an Icterid. The males are black with prominent red shoulder patches, edged in orange or white, depending on the species. The females are brown and heavily streaked. Similar birds occur in East Africa. In many low, swampy areas and areas grown up in tall grasses there will be black birds showing prominent red patches on their shoulders or with red edged with white. These are widowbirds, such as the Fan-tailed Widowbird, White-winged Widowbird and Long-tailed Widowbird. In addition, there are some widowbirds that have bright yellow wing patches or backs. Widowbirds belong to the family Plocidae, which contains the weavers, sparrows (the American introduced House Sparrow is a ploceid) and whydahs. The family is widely represented in Africa and elsewhere in the Old World but does not occur in the New World. Is it just coincidence that the niche occupied in the Old World by ploceids that are black with striking red patches on their shoulders is occupied in the New World by unrelated icterids?

Probably the most striking resemblance is between Old World Orioles (family Oriolidae) and New World Orioles (family Icteridae). Here the two are nearly exactly ilike, the Old World Orioles represented by six or seven species (in Africa) and the New World Orioles by somewhat more kinds in the Americas. In addition to looking alike they have very similar songs. Someone familiar with a New World Oriole and its loud liquid whistles will immediately upon hearing an Old World Oriole instantly recognise it as an oriole. And the two build similar nests, both being pendulously hung from a branch. Here there is no question but that the two kinds of orioles are the result of an evolutionary development along parallel lines.

The American cowbirds, blackbirds and grackles (Icteridae) have their parallels in the Old World among various kinds of starlings (Sturnidae). The cowbird seems to have its parallel in the Purple-headed Glossy Starling of Africa and there is a very close resemblance of the Common Grackle to Ruppell's Long-tailed Glossy Starling, both spending much time on the ground, on city lawns, etc,, and the American Rusty Blackbird seems to have its parallel in the Black-breasted Glossy Starling, occupying similar habitats.

Many instances of close convergence occur among the Old World flycatchers (Muscicapidae) and the New World flycatchers (Tyrannidae). There are numerous parallels including many that exhibit similar behaviour such as flying out and back to the same perch when insect-catching and the habit of jerking the tail up and down. The American Say's Phoebe is a light grey in colour on the back with a rusty underside. It inhabits open fields with widely scattered trees and bushes. Its exact parallel in East Africa is the Silverbird. The African Dusky Flycatcher *Muscicapa adusta* closely resembles one of the American flycatchers *Empidonax* such as the Dusky Flycatcher *E. oberholseri*. The African Grey Flycatcher *Bradornis microrhynchus* and Pale Flycatcher *B. pallidus* resemble American members of the genus *Contopus* (the pewees and phoebe). In addition, there are numerous close parallels between some of the Old World and New World flycatchers of the tropics in the two places.

The Old World sunbirds (family Nectariniidae) and New World hummingbirds (family Trochilidae) are such familiar examples of convergent evolution that it is hardly worthwhile spending any time on the subject. It is sufficient to say that these birds belong not only to different families but to different orders, the sunbirds being true songbirds (Passeriformes) while the hummingbirds are not. The uncanny similarities include brightly coloured iridescent plumages, long tongues adapted for flower-probing, and the presence in almost all cases of brilliant patches of reflective feathers above and below the slender, usually curved, beak.

There are many additional families or orders of birds that are excellent examples of convergence between Old World and New World birds. They include Old World hornbills and New World toucans; Old World bee-eaters and New World jacamars; Old World rollers and New World motmots; Old World warblers (Sylviidae) and New World warblers (Parulidae); Old World white-eyes and New World vireos; and Old World and New World vultures - it is now certain that Old World vultures are in the order Falconiformes (with eagles, etc.) and New World vultures are in the order Ciconiiformes (with storks and ibises). Were one to pick out individual examples of parallels the list would become very long. For instance, The Spotted Creeper (family Salpornithidae) is brown and white and streaked like the more northern creepers (family Certhiidae) but lacks the stiff tail of the latter family of birds. Some birds in the Old World and New World have similar or identical names but are not very similar. Thus, no one should confuse a Fan-tailed Warbler (Sylviidae) of Africa with a Fan-tailed Warbler (Parulidae) of America. The Yellow Warbler (Sylviidae) of East Africa does not resemble the Yellow Warbler (Parulidae) of America but it does closely resemble another parulid, the Palm Warbler. The New World Indigo Bunting (Fringillidae) is blue with a white bill and in this case does very closely resemble the African Indigo Bird (Ploceidae).

From these and many other uncited examples it is almost impossible to escape the conclusion that the environment of any plant or animal plays an important role in its evolution, sometimes to a remarkable degree. Whether this is to be viewed from a purely Darwinian or a Lamarckian perspective, or even as acts of Special Creation, the fact remains that birds occupying similar ecological niches in widely disjunct geographical locations and not taxonomically related to each other may exhibit through convergent development almost identical colouration, morphology and behaviour. The explanation of this fascinating aspect of biogeographical natural history remains largely a mystery to be marvelled at and delighted in by us all.

John D. Goodman, San Bernardino County Museum, 2025 Orange Tree Lane,
Redlands, California 92373, U.S.A.

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CARMINE BEE-EATERS EXCAVATING NEST HOLES NEAR LODWAR

The southern edge of the breeding range of the Carmine Bee-eater *Merops nubicus* just penetrates northern Kenya. Breeding is known in the Lokichokio area 4°12'N 34°21'E of northwest Kenya, and a colony has recently been discovered near Rhamu 3°56'N 41°13'E in the far northeast (Lewis & Pomeroy in press). But records of breeding activity are not numerous and it seems worthwhile to record recent events near Lodwar 3°07'N 35°36'E.

On 21 March 1986, David Pearson, Don Turner and I were driving about 18 km east of Lodwar when we noticed a hundred or more of these bee-eaters perched on a bare sandy area of about 50 m² extent, on a low rise near the road. It was dusk, so we decided to camp in the area to observe events.

That evening, about 150 birds could be seen excavating nest holes in a *c.* 10° slope on the rise, to the accompaniment of much calling. Some individuals chased each other. As it got dark, they trickled off to roost, probably in the riverine woods of the Turkwell.

The next morning, large parties began to return to the area at 6.45 a.m., exactly at sunrise. They commenced flying around the nesting area in large loose but sometimes synchronised flocks, calling loudly and continuously. It was a splendid sight.

Numbers built up until about 300 individuals circled the area, calling loudly, in loose wheeling formation. At 7.20 a.m. they came in more or less *en masse* to the nesting site. Most landed at once, but a few circled low above the ground.

It was then that we realised that two other nest sites were also active. One was *c.* 500 m south of us, where about 150 birds were around holes in a *c.* 60cm high bank of a track. And there was a second flat sandy site *c.* 100 m to the north of the one that had originally attracted our attention. The colony in the bank of the track had burrows that birds could almost disappear into, but the second flat site had only a few, barely started, 2 cm deep holes.

The birds' digging method was interesting. Each adopted a hunched posture, and leaned forward so that its upper belly was resting on the ground; then would jab at the soft sandy soil with its bill, and scrabble the loosened sand out with backward motions of its feet. There was some aggression between individuals struggling to dig in the same hole, and the neck feathers were fanned out into a ruff, presumably as a threat display. One bird mounted another already digging, but copulation did not occur.

Breeding records of this bird from northern Kenya are in the April - June rainy period. Heavy rain had already fallen in the Lodwar area, and our birds were in the initial stages of colony formation.

REFERENCE

Lewis, A.D. & Pomery, D.E. in press. *A Bird Atlas for Kenya.* Rotterdam: Balkema.

Adrian D. Lewis, African Birding Ltd., Box 25296, Nairobi

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POSSIBLE RAIDS BY AFRICAN GOSHAWK ON BIRDS FEEDING IN *ACOKANTHERA FRIESIORUM*

My house and garden are in Ring Road, Parklands, on the ridge above the Mathari River. Before houses were built on that side of the road we were able to cross the river and go up at once into Karura Forest. In front of the house are two Acokanthera trees which this year have produced a particularly heavy crop of fruit, and many birds have come to feed on the berries, hundred of Bulbuls and Mousebirds, many thrushes and no doubt others. Earlier in the season Hartlaub's Turacos came by twos and threes, but I have not seen them for some time now, and their place has been taken by Silvery-cheeked Hornbills which flap about knocking down fruit and sticks.

African Goshawks *Accipiter tachiro* live in the neighbourhood and hunt in my garden, as I know, for I have often seen them. No doubt they find the crowd of birds in the Acokanthera a tempting bait. But the trees are near the house, and from one direction a hawk might find it difficult to complete its rise after a stoop without hitting the wall, and might have to drop its prey in order to make good its escape.

On 7 April we found a dead Bulbul *Pycnonotus barbatus* just outside the front door, still warm and bleeding, with injuries which could only have been inflicted by a bird of prey. On 9 April I was in the sitting room when I heard a bump as of a bird hitting the door or window, so went outside to see if there was a stunned or injured bird in the flower-bed outside. There was nothing there, but just inside the open front door was a dead mousebird *Colius striatus* with an Acokanthera berry still in its mouth. The abdominal wall had been so badly torn that some of the internal viscera were coming out, including a large tapeworm! It could not possibly have flown there, and I can only suppose that the bump I heard was made by the Goshawk itself striking the wall or door.

Both dead birds (and the tapeworm) were taken to the Museum.

Priscilla M. Allen, Box 14166, Nairobi.

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DEMOISELLE CRANES IN KENYA

We were a party of four in a Datsun Station Wagon, driving up the Ngomeni track north of Malindi, towards Che Shalle Sea Lodge. Time, noon on 15 January 1986.

Just before the Che Shalle track turn off we noted 9 large birds on the ground about 20 metres from the track, and as they were most unusual we stopped to watch them.

The salient features were grey back and tail. Black face, chin and neck and lax breast feathers. Red eye. Prominent white tufts behind the eyes.

They were obviously cranes, and on checking our literature, they were without doubt Demoiselle Cranes *Anthropoides virgo*. It would seem that they migrate from Euro/Asia and occur in the Sudan and northern Ethiopia, but there is no record of their appearance in Kenya.

Unless they were escapes from a private collection, this would appear to be the first sighting here. Any further information would be welcome.

Tom Grumbley, Box 200, Kiambu.

LIONESSES KILLING SERVAL

On 13 March 1986 I was just south of Governor's Camp, Masai Mara where I had just found three adult Lionesses *Panthera leo*, and was driving quietly behind them as they walked along a track through 50 cm high grass.

The lionesses were moving slowly, in single file, when all three suddenly craned their necks and stared intently into the grass a couple of metres to the left of the track. One immediately rushed into the grass, executed a couple of very tight twisting turns, and chased an adult Serval *Serval felis* out onto the track, straight into contact with the other two lionesses.

The serval frantically tried to escape, but was knocked flat by an enormous paw and killed well nigh instantaneously by a single bite through the rib cage and abdominal cavity.

The lionesses left the dead serval at once - it was presumably too small to be worth eating - and continued on up the track. They began stalking a Topi *Damaliscus korrigum* a few minutes later.

Adrian D. Lewis, African Birding Ltd., Box 25296, Nairobi.

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HAPPY BIRTHDAY, OLIVE THRUSH

Ten years ago, Daphne Backhurst, June Dirks and I caught and ringed two Northern Olive Thrushes in my garden on Nairobi Hill. As luck would have it, B 13393 ringed on 21 June 1976, and B 13397 ringed on 12 July 1976 were a mated pair. Over the years I have observed these ringed birds almost daily, and on this the tenth anniversary, Cecilia Gichuki of the National Museum has convinced me to put it on record.

The garden is a small oasis of trees in the growing urban sprawl. Some 38 species of birds are found there each week, and others occur more erratically. The Northern Olive Thrush is a common and conspicuous year-round resident.

Thrush song wakes us in the mornings; Thrushes come daily to drink or bathe at the bird-bath and to feed on papaya rind left over from our breakfast. Thrushes scratch among the dead leaves for invertebrates, preen in front of my window, and raise the alarm at cats, snakes or birds of prey.

From June 1976 to June 1982 I saw the ringed pair of thrushes almost daily. They appeared to remain mated and to sing throughout the year. Whether they defended territory year-round is less clear; other Olive Thrushes were sometimes chased off, and sometimes tolerated.

There are usually more than two Olive thrushes in the garden. It may be that the garden is on the boundary line of two Olive Thrush territories, or that the bird-bath, by virtue of its essential quality, is in a "no man's land". I was not able to keep track of breeding periods, as I rarely saw a nest. The one nest built beside my window was robbed by a passing White-browed Coucal. Sometimes I saw Olive Thrush fledglings. One year there were four or five fledglings around the bird-bath, indicating that broods from several pairs of thrushes were using this "public facility". (All records of fledglings were sent to the EANHS Nest Record Scheme.)

Then in 1982 one of the ringed thrushes disappeared, and I assume it died. The other one must have mated again; I still see it every day that I look at the fruit or the bird-bath or elsewhere in the garden. A few times I have seen it singing. Do both male and female Olive Thrushes sing? I do not know. Once I saw the ringed thrush bring a fledgling to the fruit.

so for ten years at least this Olive Thrush has lived in the garden. In 1976 and 1977 we also ringed other birds, but I no longer see them. They may have died, gone elsewhere, or lost their rings. Up until last year I occasionally saw a ringed Baglafecht (Reichenow's) Weaver, but I could not be sure that it had been ringed in this garden.

The adult Ruppell's Robin Chat eluded our nets, so I have no proof to back up my feeling that the same singing male has been in residence in the garden for more than ten years, and defends its territory all year long. I personally think that small birds live longer than we expect, perhaps ten to twenty years once they have survived that most dangerous first year of life.

Fleur Ng'weno, Box 42271, Nairobi.

NAIROBI'S TOP TWENTY

As most members know, the Wednesday morning bird walks led by Fleur Ng'weno have been a regular feature of the Society's activities for fifteen years. Not so widely known perhaps is the fact that records have been kept for the last ten years, of all our sightings, and these can be consulted at any time by contacting me at Telephone 61558.

From these records one can extract, for instance, lists for individual locations, or information on the times of year when certain migrant species can be seen.

To mark these ten years of record keeping I have compiled the following list of Nairobi's twenty most seen birds (by the Wednesday morning group). This does not necessarily mean that they are the most numerous, only that they are the most wide-spread in the area and the commonest in Nairobi gardens.

The placings are taken from the last four years sightings i.e. 1982 to 1985, and the figures in parenthesis represent the position over the previous six years. You may note that the position of the Black Kite has moved up from 9th to 2nd and the Pied Crow down from 19th to 11th, otherwise the "Top Twenty" remained fairly constant over the ten year period.

NAIROBI'S TOP TWENTY		1982-85	(1976-81)
Variable Sunbird	*Nectarinia venusta*	1	(3)
Black Kite	*Milvus migrans*	2	(10)
Common Bulbul	*Pycnonotus barbatus*	3	(2)
Baglafecht Weaver	*Ploceus baglafecht*	4	(1)
Speckled Mousebird	*Colius striatus*	5	(7)
Streaky Seed-eater	*Serinus striolatus*	6	(4)
Red-eyed Dove	*Streptopelia semitorquata*	7	(8)
Bronze Sunbird	*Nectarinia kilimensis*	8	(6)
Singing Cisticola	*Cisticola cantans*	9	(9)
Fiscal	*Lanius collaris*	10	(5)
Pied Crow	*Corvus albus*	11	(19)
Tropical Boubou	*Laniarius ferrugineus*	12	(11)
Northern Olive Thrush	*Turdus abyssinicus*	13	(15)
Ruppell's Robin Chat	*Cossypha semirufa*	14	(17)
Rufous Sparrow	*Passer motitensis*	15	(16)
Collared Sunbird	*Anthreptes collaris*	16	(20)
Yellow-breasted Apalis	*Apalis flavida*	17	(12)
White-eyed Slaty Flycatcher	*Melaenornis chocolatina*	18	(13)
Yellow-rumped Tinkerbird	*Pogoniulus bilineatus*	19	(18)
Robin Chat	*Cossypha caffra*	20	(14

Pat Wooton, Box 46143, Nairobi.

HONEYGUIDES

On 13 January 1986 Professor Lester Short of the American Museum of Natural History spoke on behalf of his and Jennifer Horne's recent Honeyguide studie, mainly on the Laikipia Plateau. Their newest findings were reported. After a year of non-breeding (1984) many young were produced in 1985, and 54 Honeyguides have now been ringed including 29 Scaly-throated, 13 Lesser, 11 Greater and one Pallid all these within 50 m of their constant wax-feeding site. Scaly-throated Honeyguides are dominant to others, but female Greater Honeyguides are dominant over males, subadult Scaly-throated are dominant to adults, but the very distinctly plumaged young Greater Honeyguides are dominant to all others. From 10 to 20 honeyguides visit the site regularly and there is a dominance heirarchy within species which changes with the condition of the birds. Male Greater Honeyguides arch their head and neck and erect the head feathers both in bowing during aggressive encounters, and on the first note of the Vic-tor song. Song variants, pew notes, and other vocal displays were described. The "guiding" call is a major aggressive call during interaction among Greater Honeyguides. The "guiding" habit seems to be restricted to the Greater Honeyguide. The other honeyguides pay close attention to humans in relation to honey-gathering activities, and to Greater Honeyguides, but they do not actually guide.

Scaly-throated Honeyguides favour dense vegetation, they skulk about, and normally feed by gleaning on tree bark and in foliage, as well as by flycatching. At the wax source dominant birds often spend much time defending the "hive". Subordinate birds slip into the hive and feed while dominants fight. Lesser Honeyguides are able to feed about the hive in the presence of dominant Scaly-throated Honeyguides. The Lesser and Pallid Honeyguides probably are able to obtain wax from the walls of abandoned hives - in any event they flycatch frequently and show less need for wax, although they seem less sensitive to the bees that may be present. Under pressure at the "hive" a bird often carries away a piece of wax, and other honeyguides then chase after it.

The Scaly-throated and Lesser Honeyguides, as well as a Sokoke Forest small honeyguide, tentatively identified as a Kilimanjaro Honeyguide, have aggressive alternate "songs" used during sustained aggressive encounters. Scaly-throated have a buzzy chatter and the other two a trill also used during encounters. Flight displays with "winnowing" have been tape-recorded for Greater, Lesser and "Kilimanjaro" honeyguides. In the case of the Greater, the "flip-flip" winnowing flight is always above a female or presumed female, and the male displaying ends his flight with a series of Vic-tor songs. Short and Horne still have not ascertained for certain the identity of the central African Willcock's Honeyguide- singing bird at Laikipia, that well may be the Pallid Honeyguide. The studies continue, and this year will concentrate on the breeding behaviour and distribution of the ringed birds.

L. Short, American Museum of Natural History, New York, N.Y. 10024, U.S.A.

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At the same meeting, Prof. Short announced the 7th Pan-African Ornithological Congress to be held in Nairobi from 28 August to 5 September 1988 under the Chairmanship of Prof. Geoffrey Maloiy.

This should be a great opportunity for Kenya students and others to meet specialists in African Ornithology, and learn about birds.

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NOTES FROM NAIVASHA

Jean Hartley's useful little booklet entitled *A Guide to the Lake Naivasha Area* mentions Elephant as 'Occasional visitors'.

About July 1985, returning from a weekend on the Small Lake named Oloiden Bay in the booklet, we passed, on the North Lake Road, just opposite the Crater Lake, what looked, for all the world, like elephant droppings.

The idea was quickly dismissed from our minds. However, having seen a second and then a third such visiting card, we stopped and looked more closely.

It was unmistakable. Rhino and Hippo might be slightly similar but these were undoubtedly elephant.

We did hear later that a couple of Elephant had been seen on Ndabibi Farm, but have not been able to confirm this.

It is particularly interesting to consider where these wanderers might have come from.

We understand that there are no elephant left on the Mau. It is difficult to believe that they could have come down from the Aberdares.

There remains only the Mara, and perhaps up through Oljorua Gorge (Hell's Gate). And where did they go on to on leaving this area?

Another surely rare visitor to Naivasha, seen about Christmas 1985, reported by Mr John Wright of Sserian Farm, was the Pygmy Falcon *Poliheirax semitorquatus*. John is familiar with this bird elsewhere and adds that this is not the only Christmas time that he has seen it here.

This falcon is not included in Hartley's list and is well above its normal altitude (1600 m) as given by Britton in *Birds of East Africa*.

Finally, whilst watching the shoreline of Oloidon Bay, we were intrigued by a steady, determined to and fro movement of Yellow-billed Duck *Anas undulata*.

It appeared that they were feeding at the grass verge for a few moments and then hurrying to the water's edge, a distance at this point of about 10 metres, to "wash it down". The interesting question was - what was "it"?

With John Wright's help we came to the conclusion that they were feeding on the seeds of the water plant *Potamogeton schweinfurthii*, currently fruiting. Its coarse finger-millet like heads standing up in the air all along the water's edge some 8 to 15 metres from the shore line.

On closer inspection of the grass verge, we noted a layer of the seeds, dry and hard from exposure to the sun, each about the size and shape of a small sorghum seed.

We came to the conclusion that this was what they were eating.

Geoffrey and Dorothy Irvine, The United Kenya Club, Box 42220, Nairobi.

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A NEW VIEWING FACILITY AT THE ARK

The Ark has a new and fascinating night-viewing facility. The catwalk at the rear of the building has always been good for birds, but lately the addition of lights above an area where food is regularly put out now makes it an excellent place to see the smaller and more elusive nocturnal mammals at close quarters.

Bush Pig, Greater Galago, Black-tipped Mongoose and Large-spotted Genet are all regular, and Crested Rat has been recorded too. Doubtless the list will swell. The animals are all excellently seen, only a few metres from observers.

This brings a whole new interest to the Ark experience, particularly for Kenya residents who are familiar with most of the larger animals but still have a long way to go with the smaller ones.

Adrian D. Lewis, African Birding Ltd., Box 25296, Nairobi.

76th ANNUAL GENERAL MEETING, 18th MARCH 1985 - JOHN KOKWARO

It gives me great pleasure to welcome all of you to our 76th A.G.M. today, who have come to listen and to hear about our successes and failures during 1985. 1985 can be summarised as a fair year with some of our activities moving smoothly while others experienced some difficulties. There were relatively fewer regular volunteer helpers during the year. This was as a result of some people having left the country during 1984 and 1985. This caused some difficulty in discharging our duties efficiently. The monthly evening meetings were only sporadically attended, depending on the popularity of the subject.

Probably our most popular and regularly well attended activity were the weekly Wednesday morning bird walks led by Mrs Fleur Ng'weno. The second Sunday morning monthly "pot luck" excursions were better attended last year, after some reminders to members in the Newsletter and Bulletin. I sincerely thank Mrs Ng'weno for her dedicated efforts in organizing these functions. There were several camping trips during the year which were well attended.

The Society's publications included only one Journal part, No 181 "A checklist of the species of termites (Isoptera) recorded from East Africa". However the Editorial Committee worked very well and have edited many papers which have been passed on to the printers. In fact we have more papers in press and in hand than our budget allows for, and this is one reason we have had to slow down publication of several Journal parts. We had a very active Editorial Committee, consisting of Drs. Jim Hebrard and Henk Beentje assisted by Dr Mark Ritchie, and I commend them for their good work. The Bulletin continued to appear and is now published quarterly as resolved at the A.G.M. in 1984.

Newsletter - the suggestion from the Executive Committee to the A.G.M. last year was that the Newsletter should come out on alternate months when the Bulletin is not published however, this proved not feasible, since the Bulletin now appears quarterly. So, as resolved at the 1984 AGM the Newsletter appears monthly.

For all our publications our major problem was the mail; articles were either received late or never reached us. We suspect that with the bulk postage, where a single receipt is issued at the Post Office for all 50 - 200 articles posted, they may have been posted late or not at all. We are investigating the problem, since we suspect there may be other reasons for this.

Scopus and the Annual Bird Report were published regularly by the Ornithological Sub-Committee.

The Library functioned smoothly throughout 1985, with ample reading space, more new reading material and improved management. Our request to have the Library open during the lunch hour was considered by the Museum Director, but after a period of experimentation it was found that it involved some security risks and was not very well patronised so has been discontinued. The Executive Committee agreed with the explanation given by the Museum Director.

I would like to thank the following people who have assisted me in running the Society's affairs throughout 1985: Mrs Hilary Fletcher, Mrs S. Harrison, Mrs H. Siegenthaller, Mrs J. Stanforth, Mrs Yolande Williams, Mrs S. Gabri, Mrs Katie Smalley, Mrs H Schulthess, Mrs D. Backhurst and Mr & Mrs B.V. Jex. I am grateful to the members of the Executive Committee for their help and support.

Our relations with the National Museums of Kenya was excellent, and on behalf of the Society would like to thank the Museum Director Mr Richard Leakey for a allowing us to continue using the Lecture Hall and other facilities.

May I conclude my remarks by thanking all members of the Society, both local and overseas, for their continued support. Our major problem has been on the administration of the office and I would appeal for more volunteers including office bearers. Please also attend Society functions and make suggestions to our unctions Organizer. With your support and co-operation we can overcome these few prEblems and make the Society more active.

SOCIETY NOTICES

THE SOCIETY OFFICE

As Members will be aware, there have been problems connected with the administration of the Society Office.

Mrs Martina Muga is now Acting Secretary and has succeeded in clearing up a considerable number of the oustanding points at issue. Therefore, you should, in future, receive Bulletins, Newsletters, Journal parts and replies to correspondence regularly.

Any inconvenience is deeply regretted and we trust that Members will continue to support the Society. Volunteer assistance in the Office is always welcome and Members will find a new atmosphere prevailing. Mrs Muga mans the office on Monday, Wednesday and Friday regularly during normal opening times.

John Kokwaro, Chairman E.A.N.H.S.

FOR SALE

CHECLIST OF THE BIRDS OF UGANDA: This booklet which is uniform with the Checklists of Kenya and of Tanzania is now available at the Society Office, price. K.SH.20/-.

This lists all Uganda species and is similarly as good as the previous checklists of Kenya and Tanzania. GET YOURS NOW !

CONTRIBUTIONS TO THE BULLETIN: Members are urged to contribute short notes, letters to the Editor and reports on Society Functions. No doubt those Members who recently took part in the trip to Masai Mara will have some interesting observations to impart? As will those who participated in the Sunday "Pot Luck" excursion on June 8th? Contributors are requested to post their 'pieces' direct to the Editor, Box 24734, Nairobi.

The next issue (Vol.16 No.3) will appear during September, so contributions should reach the Editor before the end of August.

EAST AFRICA NATURAL HISTORY SOCIETY

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Vice-Chairman: Mrs Fleur Ng'weno

Secretary (Acting): Mrs Martina Muga

Treasurer: Dr S.G. Njuguna

Hon. Librarian: Miss P. Allen

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Joint Library Sub-Committee: Miss P. Allen, N.K. Chumo

Nest Record Scheme Organizer: Mr P.B. Taylor

Bulletin Editor: Mrs D. Backhurst

Newsletter Editor: Mrs Martina Muga

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The above list supercedes that which appears on the back cover of this Bulletin The remaining information remains the same.

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THE EAST AFRICAN NATURAL HISTORY SOCIETY

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Vice-Chairman: Dr. A.D. Lewis
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Nest Record Scheme Organiser: Mr. P.B. Taylor
Bulletin Editor: Mrs. D. Backhurst

MEMBERSHIP

This offers you free entry to the National Museum, Nairobi; free lectures, films, slide shows or discussions every month in Nairobi; field trips and camps led by experienced guides; free use of the Joint Society-National Museum Library (postal borrowing is possible); reciprocal arrangements with the Uganda Museum, Kampala; family participation; wives and children of members may attend most Society functions; one copy of the EANHS Bulletin every two months; a copy of each Journal published during your period of membership; the Society controls the ringing of birds in East Africa and welcomes new ringers and runs an active Nest Record Scheme; activities such as plant mapping and game counting are undertaken on a group basis. Membership rates are given at the foot of this page.

JOURNAL

The Society publishes The Journal of the East African Natural History Society and National Museum. Each issue consists of one paper, however, sometimes two or more short papers may be combined to form one number. The aim of this method of presentation is to ensure prompt publication of scientific information; a title page is issued at the end of each year so that the year's papers may be bound together. Contributions, which should be typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five reprints of their article free, provided that these are ordered at the time the proofs are returned.

E.A.N.H.S. BULLETIN

This is a duplicated magazine issued six times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (EANHS Bulletin), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

SCOPUS

The Ornithological Sub-Committee publishes this bird journal five times a year. Cost: EANHS members KSHS.75/- p.a. All correspondence to D.A. Turner, Box 48019, Nairobi, Kenya.

MEMBERSHIP SUBSCRIPTION RATES

	LOCAL	OVERSEAS	
Institutional (schools, libraries) . . . annual payment:	KShs.100/-	US$ 11.00	£st. 7.00
Full Local and overseas . . . annual payment:	KShs.100/-	US$ 11.00	£st. 7.00
Junior (full-time student, no Journal supplied) . . . annual payment:	K.Shs.10/-	US$ 4.00	£st. 2.50
Life Membership..	KShs.1500/-	US$ 144.00	£st.90.00

Subscriptions are due 1st January. From 1st July you may join for KShs.50/- and receive publications from that date. Application forms for membership are obtainable from the Secretary, Box 44486, Nairobi.

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BULLETIN

A publication of the East African Natural History Society, Box 44486, Nairobi, Kenya. Price 10 shillings.

EANHS BULLETIN Volume 16 (3) September 1986

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NOTES ON THE NESTING OF AFRICAN HAWK EAGLES

MARCH 1985 - JANUARY 1986

A pair of African Hawk Eagles *Hieraaetus spilogaster* were observed over a period of ten months at a site on the banks of the Ewaso Nyiro River on El Karama Ranch in Laikipia. The nest was in a Yellow-barked Acacia Thorn Tree or Fever Tree and was an old Hamerkop nest which the eagles took over

The birds were first noted on 19 March 1985 when both adults were seen rebuilding and rearranging the old nest, using both old sticks from the existing structure and new material which was brought mainly by the male bird; the female remaining on the nest, building and rearranging it. By the next day, 20 March, the nest appeared to be complete, well sticked with a basket-like wall built up round the top. It was built on the higher end of a platform like structure, the lower part of the platform was used to land on and perch upon. There was no sign of the Eagles.

The nest was observed at frequent intervals from 31 March until 20 August, when the birds were seen on it, near it or in the vicinity hunting up and down the river. The female spent a lot of time on the nest either sitting low down in it or moving around rearranging it, having possibly laid an egg. However, on 10 April, when the site was observed, there was no sign of either Hawk Eagle although a Hamerkop appeared, obviously inspecting its old nest; eventually he flew upstream where he began constructing a new nest. On 12 April both Hawk Eagles were seen flying down the stream with what appeared to be the immature bird of the previous nesting. The immature was not seen again. On 19 April both Hawk Eagles were seen sitting on a branch overlooking the new Hamerkop nest, the Hamerkop calling madly, perhaps trying to see the eagles off? On other days both birds were seen sitting in the vicinity of their own nest, either sitting on another tree or inspecting the nest and occasionally bringing new nesting material which was incorporated into the structure; several times twigs and branches with green leaves were brought and apparently built in to reinforce one end which was now higher than the other.

On 11 May both eagles were in the nest, then the male moved to the next tree, on guard. The female remained in the nest sitting right down apparently on an egg although no egg was seen. The next day neither bird was seen though on 16 May both birds were active bringing new material and sitting in the nest. This behaviour continued over the next three months i.e. the birds making frequent visits to the nest bringing fresh material, incorporating it and rearranging things.

On 23 August both birds were seen on the nest, the male then flew off leaving the female sitting well down, she remained on the nest apparently incubating an egg. This continued until 6 October with the male occasionally being noted apparently incubating. Between 4 and 6 October the female appeared restless, getting up and sitting down again but sitting high. On 7 October the nestling was definitely proved to have hatched. It was seen in the nest alone with one adult perched in the next tree. It had a fluffy light grey head and brown body; the female later went to brood it. On 9 October the female was in the nest with her chick which was seen to have a pale yellow gape and was moving around. The female was eating food in the bottom of the nest which was later regurgitated and fed to the nestling. She left the nest for a few minutes, returning with some leaves which were put in the nest, maybe to shield the nestling from the sun? The birds were watched until 12 noon by which time the female had spread her wings round the young bird like a cloak. On 10 October the female was seen again sheltering her nestling, eating food from the bottom of the nest, then regurgitating it to feed to the young bird; this continued over the next few days with the male being seen occasionally nearby.. On several occasions he flew over in an aggressive manner in an obvious attempt to warn off the human observer. He had also been seen warning off avian intruders of various species several times in similar manner.

On 17 October the nestling was seen alone on the nest, by this date he was much bigger, his body brown and white, grey smooth looking fluff on his head and a large bill and big eyes, he jumped from one end of the nest to the other then the female came with a bunch of leaves which she seemed to put over him, she remained for a few minutes and flew off; the nestling then settled down at the bottom of the nest. The next day the young bird was seen walking about in the nest then sat down. His downy plumage had nearly gone apart from the top of his head which was still covered in fine grey fluff. The female appeared to be cleaning a carcase, the youngster then sat up and jumped towards the female apparently begging for food, it was seen that his wings were whitish grey, his body brown and, when the female fed him after tearing pieces of food which were chewed before being offered to him, his gape and bill were seen to be very yellow. The feeding session on this day went on for about half an hour, and after the young bird had settled down the female continued to feed herself, then they both settled at the far end of the nest away from the larder.

On 20 October the nestling was seen stretching his wings and flapping them, they appeared to be whiter than before. On 22 October the female was seen to bring a large bunch of leaves to cover the young bird. By 23 October when the nestling was seen alone in the nest, sitting up and looking around, it was noted that the head was less fluffy and whiter with black markings round the eyes.

On 24 October the youngster seemed to be feeding himself with food from the bottom of the nest and the female once again brought leaves which she appeared to be putting over her young. On 26 October more leaves were brought by the female; the young bird was seen stretching his wings and hardly any fluff remained on the head, the wings were grey/white with black spots noted either on the wings or the breast but it was difficult to determine which as the bird was sitting low in the nest. By 30 October it was plain that his wings were white, edged with black and when he stretched the wings the span was seen to be quite large.

This brooding behaviour continued for about three weeks, the nestling becoming more active and beginning to look like a miniature adult. During this period the bird's wings changed colour to a fawn or light brown with black edges and the top of the head became dark blackish brown like the adults. The tail was fawn underneath. During this period the adult birds remained in close attendance, the female feeding the young bird and occasionally both adults brought fresh green leaves to the nest. Domestic fowls apparently constituted part of the diet as white feathers were noted on or near the nest on more than one occasion.

On 16 November the young bird was alone on the nest and the following plumage details were noted: head feathers dark brown; bill black edged with yellow; a white patch between bill and face with yellow lines along bill, in addition to the yellow edging; throat and neck pale fawn; eyes dark; shape of face pointed; under tail feathers fawn.

On 21 November, the nestling now about 48 days old, was alone on the nest flapping his wings, then the adults called and the young bird came up in the nest putting his wings right up as he stood on the edge of the nest - a beautiful display with the fawn, white and dark brown plumage colouration shown off at their best. The adults came in and it became apparent that a flying lesson was in progress as the youngster again put his wings up and tried to fly. He hopped from the nest to a small branch above and back again twice, then sat again in the nest. On subsequent days the young bird exercised his wings, hopping from one end of the nest to the other and by this time he was feeding himself.
On 3 December the eaglet flew, first to a higher branch and then from the nest tree to another where the adults were perched, the parent birds ignored him so he flew a bit nearer, then the female flew closer as if to encourage him.

On 7 December the nest was deserted but the eaglet was seen on the other side of the river in a bare tree, a drongo was harrassing him by diving at him, the youngster ducking out of the way and calling continuously. Eventually he flew though not very strongly to a bare tree on an island in the middle of the river but soon flew off across the river to a more leafy tree to avoid the attacking small birds: the flight was still unsure. The parent birds appeared calling, so he flew again back to the nest then both adults left so he again took refuge in a leafy tree across the river.

On 8 December the female and the young bird were both on the nest at opposite ends of the nest platform continually opening their beaks and emitting tiny 'chucking' sounds. The female then left the nest leaving the youngster alone, he appeared upset and flew off to hide in a big leafy tree. Over the next few days the flying practice continued.

On 15 December all three eagles flew towards the nest together, the female and the young bird landed in the nest but the male took up position in another thorn tree nearby. The female then flew off and returned with a leafy branch which she presented to the youngster who appeared most excited to receive it, doing a little dance as he greeted her; they then performed the ritual of opening their beaks and making the small chucking sounds. The female flew off with the male, the young bird obviously wanted to follow but hesitated, finally gliding off to search for his parents. After some minutes he was seen flying in the sky giving a magnificent performance allowing the thermals to lift him up, turning in them moving his wings and gliding very professionally. He seemed to have learnt fast.

On 20 December the young bird was seen flying well, turning and gliding very expertly in and out of the tops of trees. Then he flew off to join the female and they both performed aerobatics up and down the river calling to each other with the small 'chuck' call. The next day similar exercises continued, swooping, diving and turning up and down the river. He then took off again still calling, flew very high circling well with no flapping of the wings; the adults were observed in the sky high above him, the youngster then came down fast with half closed wings to land in a tree. The adults followed landing in the same tree but a little higher. The eaglet bowed his head giving his little 'chucking' call opening and shutting his beak 'kowtowing' to his mother. The adults flew off again leaving the youngster to continue his flying practice.

30 December the young bird was sighted for the first time since 21 December, calling with the little 'chuck' call, the adults eventually came along and all three birds flew, circling the river and then off very high in the sky. On 2 January the youngster was seen with the female, giving the 'chuck' call and again 'kowtowing' to her. Both birds had full crops. By now the eaglet was very big with more white on his back.

POSTSCRIPT

The birds were seen again near the nest tree on 6 March 1986 but on two subsequent occasions there was no sign of the immature bird.

On 23 March the female flew into the nest, she sat quite still just looking, not moving sticks around. Perhaps she will start another family?

The above is a narrative précis of detailed field notes made by Mrs Mavis Heath, c/o Box 7, Nanyuki. Her notes are lodged in the Ornithology Section of the National Museum, Nairobi where they are available to anyone interested.

It is difficult to determine when incubation actually started, but the figure of 42 - 44 days quoted in Roberts *Birds of South Africa* does seem to coincide with the period from when the female began to sit right in the nest on 23 August to the definite hatching date of 7 October. Whether there had been two previous unsuccessful attempts at breeding during the whole ten month period, i.e. in April and again in May, is not clear but seems possible - third time lucky?

Editor.

Scientists, like everyone else, differ widely and include at least three types. There are the rare geniuses who work twenty hours a day and produce over a thousand publications in a lifetime of frenetic research activity. Then there the ordinary kind who usually select some tiny corner of science and spend a lifetime working at it, pushing back a small frontier of knowledge, no matter how minute. They and the first type try to work as near as possible to the cutting edge of discovery so that whatever they do is new and worthy of publication. Finally, there are the dilettantes, scientists who delight in so many things that they ultimately achieve little or nothing of consequence. This may be an oversimplication but after over forty years experience in science it is fairly accurate, in my judgement.

As a young man, in college during the thirties and graduate school during the forties, I knew that if indeed I were a scientist I was clearly of the making of the third type. I thought that the word dilettante was pretty much the same as the English term dabbler, so when I found out it came from the French, *dilettare*, which is to take a delight in, I was comforted to some degree, knowing however that I did definitely dabble.

For the past three months I have been delightedly dabbling. Soon, I am leaving Uganda after 28 years, unfortunately not 28 continuous ones but I have been here since the fifties during every decade until now. In July I had completed my two years of teaching in the Zoology Department at Makerere and planned to go out and work in the Queen Elizabeth National Park until the end of the year. Alas. July 27 and the coup changed all that and I was in Kenya for most of the months of August and September, then the situation was such that it was difficult to travel to western Uganda. Finally, on December 3 my wife and I left Entebbe and flew to Kigale and then went overland to Queen Elizabeth Park. Here we discovered a bright new world quite different from grim Kampala, children in army uniform using their rifles as hockey sticks as they ran around Mweye Lodge, people sitting and enjoying themselves watching the scenery from the verandah. We too stopped briefly for refreshment and to look at the view of the peninsula from the Lodge, then we went to our house at the Uganda Institute of Ecology. UIE is the successor to NUTAE, the Nuffield Unit of Tropical Animal Ecology, which operated from 1961 - 1971 at Mweye. It is an active research station and there are usually several scientists there, but when we arrived no one, not even the Director Dr Edroma who got caught on the Kampala side after attending a meeting in Zimbabwe, was there.

My purpose in coming to Mweya was manifold, elevenfold, in fact. I had made a list of eleven little unfinished bits and pieces of research covering over 25 years that I hoped to try and complete. If I got five of them done I knew that I would be more than happy. Some went back to 1958 - 1959 when I first visited the Park. Others were left from 1966 - 1971, when I was a research associate at the Nuffield Unit while teaching at Makerere, coming out to the Park almost every vacation period for six years. Jeanne, my wife, likewise had a number of things to do. She had made two films that largely featured the Park, the first, "Jambo" in 1958/59, and the second, "Upcountry Uganda" in 1966 - 1971. My most important project was to rediscover *Hapalorhynchus beadlei*. This is a blood fluke of turtles that I discovered and named after Professor L.C. Beadle of Makerere who first invited me to Uganda in 1958. It was delayed for nearly ten years in its publication (I had too much dabbling to do elsewhere) and so when I submitted it for publication the editor pointed out that I had not placed a type specimen of the new trematode in a national museum and this must first be done. I searched for a slide of it in California, then knowing I was returning to Uganda I wrote him that I would surely collect one from the turtle host *Pelusios subnigra* while there. I spent two years trying to find this worm in turtles around Kampala, without success, not surprisingly as I had originally discovered it in turtles in Q.E. Park. So, I wrote to say please wait until I returned to the Park. He scheduled the publication for March or April 1986. In the Park I labouriously went through 13 turtles before finally, one wonderful morning, finding one of the long sought trematodes. But it was late in January so the publication has once more been delayed.

My second most important 'project' was to make a survey and count of the large animals in the Park, or more specifically in four areas of the Park that have been more or less continuously counted since two American Fulbright research bilogists began them in 1956 and 1957. If I could do one it would make a fairly complete series of counts for thirty years.

The third 'project involved my activities as a birdwatcher.. I hoped to see two birds not listed for Uganda by Britton *et al.* in *Birds of East Africa.* My field notes for December 1966 include Cape Wigeon and Least Tern (we Yanks call the Little Tern a "Least Tern"). I do not really recall the Cape Wigeons any longer but I definitely remember the small terns with yellow bills and white foreheads. At the time I did not know that they were unrecorded from Uganda, so I did not make any special notations. Mrs (Dr.) Margaret Carswell, who is compiling Uganda records, is understandably reluctant to include such records without support data, so I hoped to see them again. But all I saw this time among that group were many White-winged Black Terns (in winter dress). The Cape Wigeon were not found either, and the two "hippo pools" where I saw both of the record birds are now dried up, unfortunately.

In 1970, I had found in the Common Bulbul *Pycnonotus barbatus* a new trematode which I called *Pleuropsoloides piercei* (*Pleuropsoloides* like "*Pleuropsolus*" and *peircei* for Mike Peirce, an old friend and also a parasitologist). So, I obtained a permit to collect Park birds. I never recovered the trematode in any of them but I did collect about 75 different birds and made museum study skins of them to supplement the several hundred now in the collection at Mweya, many of which I made myself in 1958/9. Though I did not recover *Pleuropsoloides* I did find many different worms and am sure many are new species if not also new genera. Virtually no one has done anything on helminths in East Africa except from a very few hosts.

In 1954, Dr Mandahl-Barth of Copenhagen published "*The Freshwater Molluscs of Uganda and Adjacent Territories*. In 1958 I came to Uganda at the invitation of Prof. Beadle to study the molluscs and their role as carriers of disease, especially Schistomiasis (called in East Africa, Bilharzia), this being the area of my Ph.D work. The entire year of 1958 - 1959 was spent in the field collecting snails and examining them for cercariae (larval stages) of flukes. We were in Q.E. Park from the month of December 1958. Now I wished to put some finishing touches on that work done in the Park. I collected several hundred snails and examined them microscopically, making sketches and measurements when cercarial stages were found. This occupied the bulk of my time during January.

A study of four species of weavers has occupied my attention since 1966 and I needed to complete that study also. About 1960, trees, Palo Verde (the tree is an American species, *Parkinsonia aculeata*; the name "Palo Verde" means green stem) were planted around the laboratories and by 1966 they had matured and were about 10 metres high. In them nested four weavers, the Black-headed Weaver *Ploceus cucullatus* dominated the colony, their nests usually placed at the top and in the centre of the tree; Yellow-backed (also called Yellow-collared) *P. melanocephalus* nested high, near the top of the trees but peripherally to the Black-headed; Masked Weavers *P. intermedius* nested at mid-height on the edges of the Black-headed colony, their nests often in long strands, one nest built below an older one, usually with a long spout hanging below the nests; and finally, the Slender-billed Weavers *P. pelzelni* nested below the others in the bottom half of the trees. In addition, many trees also held nests of the Red-chested Sunbird *Nectarinia erythroceria*.

A nest census of May 1969, gave the following: in 22 nest trees of *Parkinsonia aculeata* and one nest tree of *Cassia grandis* there were 765 nests, including 359

Black-headed Weavers, 302 Masked, 87 Yellow-collared (Yellow-backed), 9 Slender-billed and 8 nests of Red-chested Sunbirds. In December of the same year the results were: 226 Black-headed, 43 Masked, 26 Yellow-collared, 5 Slender-billed and no sunbird nests, exactly 300 nests and 40% of the May total. However, 63% of the Black-headed remained, only 14% of the Masked, mainly due to elephant damage on the edges of the trees, 31% of the Yellow-collared (which nested higher but not out of reach of elephants), and 55% were left of the Slender-billed, which nested largely in the middle bottom of the trees and not at the edges. Now, in 1985/86 the trees are all gone except for the single *Cassia grandis*, which contains only nests of a colony of Black-headed Weavers. Other *Cassia Parkinsonia* trees at Mweya sometimes have colonies of Black-headed or of Yellow-collared or Masked but I have found no more mixed colonies. The Slender-billed Weavers nest along hedge-rows in *Thevetia*, *Stenolobium (Tecoma)* and on the Lodge verandah in the *Bignonia* vines (they have always nested in these places and only a few nested with the other weavers in the *Parkinsonia*. Apparently, *Parkinsonia aculeata* wherever it occurs is a favoured tree for weavers, especially the Black-headed. The long slender leaves are easily stripped, which seems a necessary preliminary for these birds before nest building, and the leaf rachis is excellent for starting the rim of the nest. Were Black-headed Weavers ever to be introduced into Mexico, Southern California and Arizona, where the Palo Verde is native and everywhere on the desert, they would soon become pests like the House Sparrow *Passer domesticus*.

A part of my time was spent collecting material for other biologists. Dr D. Owen of Oxford, formerly at Makerere, wished me to collect land snails *Limicolaria* from the steep-sided Kichwamba craters just outside the Park as one drops down the escarpment coming from Mbarara. I did this, then descended to the crater lakes in the bottom, finding no aquatic snails, a great disappointment having made such an effort. Dr Rodolfo Ruibal, University of California at Riverside, wished to obtain lungfish from western Uganda. The lungfishes in West Africa make an hibernaculum of of secretions from their skin, whereas Dr Wasawo, many years ago, described a different kind of aestivation in Uganda, living in burrows.

I collected small lungfishes from the muddy tracks of hippo and elephant along the shores of Lake Edward below the Lodge, a place where I had found them long ago. I caught bats of several species for Mr Jonathon Baranga of the Zoology Department of Makerere for his studies on reproduction in bats. I caught and collected geckos *Hemidactylus brookii angulatus* for some of my own future studies and made some notes on observations of these interesting lizards that can be found on almost every wall, inside and out, in Uganda.

Much time was spent making recordings of bird songs and calls. I discovered that the songs of such excellent singers as the White-browed and Snowy-headed Robin Chats, Grey-capped Warblers and Bulbuls differed greatly from the songs one hears in Kampala. Much of this is probably due to their tendency to mimic other birds as well as to develop their own song repertoires independently. One of the most common small birds at Mweya is the Swamp Flycatcher *Muscicapa aquatica*. It is a tiny grey-brown bird with a distinctive dark breast-band and is far more abundant now than at any time I have been there in the past. It was fairly easy to record them in the mornings as they sang their quiet little melody, suggesting to me an American Fringillid, the Savanna Sparrow, "TSIT-TSIT-sit-TSEEEEEEEEEE" or sometimes reversing, "TSWEEEEEEEE-tsit- TSIT-TSIT" and other minor variations. While I recorded birds Jeanne filmed some of them on cine.

A trip was made to collect snails on nearby Lake George, at the other end of the Kazinga channel, and while we were there, a White-winged Black Tern suddenly flew up out of the marsh with a small snake *Philothamnus* possibly *P. heterodermis* in its bill, the snake twisting and turning furiously to escape, the tern being harried by a second tern that tried to make it drop the snake, the two flying around in circles directly above my canoe. I have seen various kinds of birds with snakes, mainly kites, but never the White-winged Black Tern, though it may be of common occurrence. Many Night Heron and Squacco Herons were flushed or seen along the shoreline of Lake George as our canoe passed close by them. Shorebirds were abundant but I did not find time to identify most of them except some Redshank and Common Sandpipers.

Eventually, after examining 13 turtles, the thirteenth yielded my long sought blood fluke mentioned above and signed *finis* to that "project". My other major "project", to make a count of the large mammals, almost foundered because at the Park HQ there were no vehicles and no easily available petrol which was horribly expensive even if I could have found a vehicle. The NRA had commandeered most of the Park and Institute vehicles, always with a letter saying that they would be returned intact or replaced with new ones at the end of the "war", which was still in progress. So, it looked impossible to do any counts. Finally I took the train to Kampala, a 17 hour nightmare, people packed everywhere including all the aisles, on the roof, between carriages etc., and got my car, which we had hidden from the UNLA when we left for the Park in December. In it, I and two of the Institute ecologists made the counts between February 20 and 23. We confined our count to the four previously designated areas because the crater tracks and the western end of the Park were entirely out of the question in a Mazda saloon. We tallied 85 elephants, 122 buffaloes, 1477 kob, 61 waterbuck (a species definitely on the decline or has been so), 47 warthogs - a fraction of those actually present but difficult to discover and count adequately, 22 reedbuck and 10 bushbuck (both these species also difficult to find and count). We did not try to count hippos because they have become more abundant than at any time since the Park was gazetted in 1952, with the Park in danger of becoming hippo monoculture. Our count areas were the Mweya peninsula, the adjacent area along Kazinga Channel, where most of the tourist tracks, such as Queen's Mile, Royal Circuit and the Channel Track area, and also the area along the road to Kasese from Katwe and along the road from Kutunguru Bridge north to the Equator road. This is a small fraction of the total area of the Park and contains only a fraction of the animals, but it is a good indicator of conditions since it contains a wide range of habitats and all the species with the exception of topi occur there. The peninsula is terribly overgrazed, almost solely by hippo, so that thickets have spread throughout it, *Capparis tomentosa* and associates such as *Azima tetracantha* and *Tarenna graveolans*, the latter permeating the entire area at night with its fragrance (family Rubiaceae, smelling like coffee blossom). Almost the only grass found on the peninsula is *Chrysochloa orientalis*, a few inches or less high and an indication of hopelessly overgrazed conditions, also *Sporobolus pyramidalis*. Many of the other areas have been burned and new grasses, mainly *Heteropogon contortus* and *Microchloa abyssinica*, are coming up with bright green new shoots and these have attracted the antelopes including kob, reedbuck and waterbuck. The unburned areas are dominated by *Hypparhenia* mostly *H. filipendula* and *Themeda triandra*. Also, the white-cottony topped *Imperata cylindrica* occurs in wide areas, not particularly favoured grass for the animals, its tough upright leaves being called "swordgrass".

It is probable that poaching, though present, is not so rampant these days in Murchison Falls National Park where, in 1984, we and our ecology students from Makere spent the night listening to the guns of three groups of poachers on three sides of us above and below us along the banks of the Nile, shooting hippos. Organized poaching, if present, is much less evident or non-existent in Queen Elizabeth Park at present. This is partly due to the fact that the Acholi, who live in northern Uganda are much closer to Murchison Falls Park than to Queen Elizabeth Park, plus the fact that until recently Q.E.N.P. had the most effective anti-poaching warden in Uganda Mr Paul Ssali. The main Park tracks, along the Kazinga channel and around the Royal Circuit and Queen's Mile, are open and easily done, but the road to the Ishasha sector and up into the craters are often impassable, depending on weather conditions.

Mweya Lodge serves excellent fish and chips three times a day or you might be able to get eggs for breakfast. Overnight at the Lodge may be expensive as at one time the cost for non-residents was $70, but this may have been reduced. A meal costs about Sh.3 000 (about $1.50) and entrance fees low, Sh.500 per person. There is a Student Camp, small units with beds, for Sh.2000 per night. It is possible that if you are a birdwatcher or such, you could apply to the Uganda Institute of Ecology, Box 22, Lake Katwe to stay at the Institute Hostel. The rate is low, but I cannot quote it. Really suitable facilities for tourists from abroad are still a long way off. Since the Kampala road either via Masaka and Mbarara or via Hoima and Mubende have opened, a trickle of tourists from Kampala and elsewhere are in the Park each weekend, usually 2 - 6 cars and 6 - 20 tourists. Bookings for accomodation are probably unnecessary at the moment. As for security, presently Uganda, at least in the south, is the Uganda of the 1960's and is almost totally safe.

Leaving the Park on the morning of February 26 I found I had succeeded in completing six out of eleven of the things I came to the Park hoping to do, including the two most important ones. With the result of the Park Count tucked away, I left the Park at 0700 h so that I could reach Kampala by 1500 h or earlier. As I crossed the narrow strip of land leading from Mweya peninsula onto the mainland, I briefly stopped, got out and looked back. A Fish Eagle and a lone Bateleur lazily circled over the Lodge. Getting back into the car and going the 7 km to the Park gate, I reflected that I may never again be in this Park and almost certainly not doing those things I had been involved in for three months, dabbling delightedly and tying up loose ends of my various "projects", but knowing that by moving on my future projects would be equally fascinating.

John D. Goodman, Mahali Juani, Mtn. Home Village, Mill Creek Canyon,
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LIONESS KILLING A SERVAL

WHY DID SHE KILL IF SHE DIDN'T EAT IT?

In the June issue of the *Bulletin* A. Lewis described a lioness in the Mara killing a Serval cat. This is an interesting observation on the killing of a competitor by a predator. Lions, whenever they have a chance, will kill other cats (cheetahs, leopards, etc.) or dogs (jackals, hyaenas), in fact, fellow predators who constitute competition for food.

Other lions are also occasionally killed but here the competition is centred on territory, not directly on food. Although in the final analysis one function of a territory is to provide an adequate food supply, so the final cause may still be considered at least in part, food competition.

Other predators are always killed with a bite different from that used for legitimate prey, which is usually killed by suffocation, either clamping down on the throat or the muzzle. Cometitors are usually killed by a bite in the dorsal region, often low down on the spine. This does not apply if the killing is as a result of a fight between adult lions or lionesses of apparently equal strength. In this case the lethal bite may occur on the neck, shoulder or head region as the lions grapple during the fight. I have never known a predator to be killed by a bite through the throat, the way prey is killed.

In the case described, the Serval was killed with a bite "through the rib cage and abdominal cavity", an unusual position for the lethal bite but certainly different from that employed for herbivores. Probably due to the Serval's small size it was a matter of grabbing it almost anywhere, the bite would still kill. In the case of a larger predator the bite should be directed towards a part of the body where a bite would kill, such as the spine.

After killing another predator lions do not usually eat the carcase, although some instances of this have been observed. These kills are in an entirely different category from the killing of prey species, and feeding is not the objective of the killing but may, on occasion, be a byproduct.

Judith A. Rudnai, Box 56519, Nairobi.

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NOTES FROM NAIVASHA

This is being written in the last week of May. During January the North side of the Little Lake, or Oloiden Bay, was very dry indeed. A total of 66 mm of rain had fallen in only three "rainy" days (defined as 5 mm of rain or more). This was three times the average total for January. The February rainfall was 14 mm with two rainy days only. March received 14 mm with no rainy days. Thus from the bird breeding point of view, the start of 1986 was inauspicious.

However, April came with 7 rainy days and a total of 122 mm, fractionally above average, and to date (May 31) we have enjoyed 6 rainy days with a total of 85 mm. I take the standard as being that shown in Brown and Britton *The Breeding Seasons of East African Birds*. The Rift Valley, hereabouts at any rate, is gloriously green under bright blue skies, scattered fluffy white clouds, and pleasant temperatures. These clouds tend to concentrate around the high ground of the Aberdares and the Mau every evening.

At the waterside, it appears (though not measured) that there has been a slight rise in the level of the lake. Wading birds are conspicuous by their absence, emphasising just how few of our indigenous birds are in this group. Once the migrants are away, the shoreline is very quiet. To establish a base line for this for the future, we counted all the wading birds on the 700 metre frontage of the lake, with the following results over three counts on two consecutive days.

Species seen	Early morning	Afternoon	Morning
Blacksmith Plover *Vanellus armatus*	4 pairs	3 pairs	3 pairs
Three-banded Plover *Charadrius tricollaris*	2 pairs	2 pairs	2 pairs
Greenshank *Tringa stagnatilis*	1 only	1 only	-
Marsh Sandpiper	1 only	1 only	-
Saddle-billed Stork *Ephippiorhynchus senegalensis*	-	1 only	-

OTHER NON-WADING BIRDS SEEN

Grey-headed Gull *Larus cirrocephalus*, present on all occasions. Unidentified Gull, all white, one pair present once only. Pied Kingfisher *Ceryle rudis*, two pairs present on all occasions. Egyptian Goose *Alopochen aegyptiacus*, one pair with young ones.

In the Yellowbarks lining the lake one pair of Egyptian Geese are apparently in the process of competing with a Fish Eagle *Haliaeetus vocifer*, for possession of a nest site. The nest is high in a very tall tree. Competition for the site is spasmodic. One incident consisted of the goose standing on the site and challenging the eagles with threat displays every time the displaced birds flew over. On a second occasion, the goose pursued the eagle in the air who, when the goose approached too close, turned on his back and presented his talons at which, the goose veered off.

On the bird table, evidence of breeding was seen in the frequent arrival of the Black-lored Babblers *Turdoides melanops* and the speedy departure of one bearing a large portion of 'ugali' to a distant nesting site. The most recent addition to the population visiting this source of food is a pair of Purple Grenadier *Uraeginthus ianthinogaster* coming in over the fence from some low bush nearby.

After what seems to have been a long silence, the Black Cuckoo *Cuculus clamosus* is again vocal, as is the Pearl Spotted Owlet *Glaucidium perlatum*, but as this tends to come and go a bit hereabouts, this is not evidence, I think, of any change in behaviour, that is, from non-breeding to breeding.

The acacia bushland behind is alive with bird life. A Black-headed Bush Shrike *Tchagra senegala* slipped away from a bush as I approached, giving away its exquisitely made nest holding three eggs.

Anteater Chats *Myrmecocichla aethiops* were feeding young in a nest hole dug into the side of a big cave-in and Tawny-flanked Prinia *Prinia subflava* were flying to and fro with nesting material, but twenty minutes careful watching failed to reveal where the nest was.

From the same stance, watching the bush concerned very carefully, we heard the familiar 'frrrrup - frrrrup" and then characteristic "clicking' of Batis, *Batis molitor*. A pair. They flew to the base of a medium sized Yellow Bark where a moment later I could see them mounting higher and higher to a lichen covered dead branch where nest building had begun, and the building was taken a stage further, one adult carefully moulding the nest with its breast.

One other bird that apparently goes silent for long periods is the Sulphur-breasted Bush Shrike *Malacanotus supfureopectus* as indeed does the Grey-headed Bush Shrike *M. blanchoti*. Throughout the period covered by these notes, the former has been heard calling daily, but we have not yet heard the latter this season.

Geoffrey and Dorothy Irvine, Box 42220, Nairobi.

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LETTER TO THE EDITOR

I read with interest the note from Geoffrey and Dorothy Irvine in the June issue of the *Bulletin*, and am pleased to hear that they find my booklet useful.

It is interesting that elephants appear to be in the area, this is by no means common, hence the description 'occasional visitor'. There is, I think, some forest on Ndabibi, and I am endeavouring to find out whether elephant may be resident there. Would any member s who have any information on this subject please get in touch with me.

The Pygmy Falcon is an interesting addition to the Naivasha list - this would appear to be an extension of range. Another species, seen by David Pearson, that does not appear on the list and should now be included is the Slender-billed Gull *Larus genei*.

Jean Hartley, Box 14098, Nairobi.

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NOTICE

Would Members who have contributions for inclusion in the next issue of the *Bulletin* please submit them not later than the end of September/beginning of October. The Editor/typist plans to be away during November and would like to get the *Bulletin* distributed in good time to avoid clashing with Christmas. Please continue to send in your observations and notes, copy is always welcome.

POT-LUCK OUTING TO NAMANGA SUNDAY 11 MAY 1986

The time to meet was 07.00 h at the National Museum on a very overcast cool Sunday morning. Some time later our vehicle caught up with the the three other cars on the road to Kajiado. Would there be rain at Namanga after a long drive? Everwhere was green with the heavy rain we had recently experienced. Decorating much of the wayside en route was the large, bushy pinky-white convolvulus *Ipomoea hildebrandtii*. Common also were lovely yellow clumps of *Crotalaria laburnifolia*.

The convoy paused to watch a group of Ostrich. Kori Bustard were seen en route as well as Guinea Fowl and Yellow-necked Spurfowl. Several Grant's and Thomson's Gazelle grazed peacefully on the young grasses. However, surprisingly, some stream beds we passed were quite dry.

Past Kajiado the deep purple-blue bushes of *Thunbergia holstii* were seen. They have attractive trumpet-shaped flowers with a pale yellow centre, it is one of the local plants in common use by gardeners. I gathered a few pieces, hoping to get them rooted for my own garden.

Arriving at the River Hotel in just about two hours, the party met up and spent some time admiring Mount Kilimanjaro, now in glorious view in the morning sunshine. After a quick drink our leaders, Fleur Ng'weno and Jo Darlington led us towards the Namanga River. We walked along a river pathway and noted that the river was being well used for bathing and washing of clothes both here and further along.

A large yellow hibiscus with purple centre was seen in the shady hedge. This was *Hibiscus calyphyllus* distinctive by its hairy, leafy epicalyx. In a low clump just beyond the riverine woods was a lovely patch of bright blue flowers. This was *Aneilema pedunculosum*, a relative of the well known Commelinas. Above us were large spreading trees of *Acacia xanthophloea*, The Acacia to expect down by the river. Another expected tree species was *Ficus sycomorus* and many Go-away birds were busy feasting on the abundant fruit of this tree.

A tree with dark green "double-balls" of a heavy fruit was quite noticeable. It was *Tabernamontana ventricosa* (syn. *Conopharyngia usambarensis*). Joseph Cheruiyot expertly threw branches to collect the fruit and soon we had one in hand, conveniently split open to reveal juicy looking orange seeds. Another tree in flower, beside the fig, had bunches of pinnate leaves, large panicles of tiny white flowers and several small green drupes as fruit. This was *Ekebergia capensis* (syn. *rueppeliana*). Our river path now had a high wall of creeper, tendrils helped the creeper scramble over other plants and the many flowered panicles helped to identify the commonest asclepiad creeper in Kenya, *Pergularia doemia*.

The party now crossed the river, using slippery stepping stones; this was done with only a minor mishap when one member got her feet stuck in the boggy mud which threatened to keep her boot! In general the company proved very agile now and later also as we climbed up the rocky hillside. In the grassy clearings by the river, with many Acacia trees and clumps of *Leonotis nepetifolia*, sunbirds flitted among the orange flower balls.

Jo Darlington pointed out some interesting termites before we could inadvertantly tread on them. These Harvester Termites *Hodotermes mossambicus*, were carrying tiny snips of grass to their nest underground. They eat this food directly and do not make fungus gardens like some other termites. Nor do they construct the typical termite "castle of clay".

The well known "sausage tree" was noticed, *Kigelia aethiopica* to the botanist. As we began the uphill path, we came across another tree with large rounded and grooved fruits, a *Rothmannia*, and below it the more insignificant shrub *Allophylus rubifolius*.

At this point a pack of dogs came bounding towards us and we stopped in our tracks. However, the owner appeared, calmed them down, and then greeted us. In fact he joined the walk and was able to impart some interesting local knowledge.

Our path continued beside the water pipes which bring down supplies to Namanga township. We clambered upwards and presently came to an open area with large schist rocks. The river emptied into a natural rock pool where many small boys were splashing and laughing. Beyond we had glimpses of the plains below to the south. We sat down under a small tree, in the hot midday sun, very much enying the splashing children! The small tree under which we sat had pods and hairy leaves and was *Lonchocarpus eriocalyx*.

A tiny fern with segments in a circular form, stuck out in rocky crevices, this was an *Actinopteris*. A few *Craterostigma pumilum*, purple rock violets, were seen on the pathway. Someone brought me an odd-shaped herb with creamy-white flowers in a brown, prickly, cup-like structure. This was the Acanth *Crabbea velutina*.

Continuing our way up the valley, we noticed a tree with the most vicious thorns. It was no surprise to learn that the common name is Buffalo Thorn *Zizyphus mucronata*. Our local man informed us that the bark provides a soup, useful to mothers just after they have given birth. No one appreciated the tough spines, one pointing forward and straight, the other recurved in the opposite direction. . . quite a problem to carry back to the cars!

We were now above the rushing river and had glimpses of the view across the riverine forest to the hills above where, Jo assured us, there were many buffalo. On the steep bank were seen the distinctive fruits, on a small tree, of *Steganotaenis araliacea*. The spherical heads of white flowers give way to the typical umbelliferous fruit (like Hedge parsley: only two in Kenya) Another small tree with small bunches of leaflets was *Haplocoelum foliosum*. A side path led us down to a delightful spot where another natural pool between the rocks collected the stream water and a convenient rocky "plaza" made the perfect place to collapse awhile and enjoy the scene. Our local guide pointed out a cave on the hillside behind, where he said Masai moran come for ceremonies. He had also pointed out a tree whose bark the Masai use to make a kind of "tea". This turned out to be a *Lannea schweinfurthii* var. *stuhlmanii*, known perhaps more easily by the Masai as Ol loinen.

Some of the party remained here, to have a swim and guard the baggage, while others explored a little higher up the river. The path was winding and narrow but it was worthwhile to reach another viewpoint. Here the river sluiced across more rocky pavements and then cascaded over a man made dam to continue on its way downwards.

An enormous grey trunk with buttressed bole soared up beside the river. From a nearby leafy shoot, taken to the herbarium, they were able to identify the fig *Ficus lutea* with its large, stiff leaves. Another large tree with its feet "wet" and having small, white, eucalypt like flowers was *Syzygium guinense* but there were none of its edible, purple fruit available.

I must not forget to mention the small specimen of the Nettle Tree, *Obetia pinnatifida* which lay across our pathway. With the utmost care we avoided its stinging glands, abundant on leaves and petiole. No specimen was collected! (A large tree of this species can be seen on the right of the Museum entrance, in the succulent garden).

An interesting creeping cucumber was collected not far away. This was *Kedrostis leloja* with conical, finger-shaped fruit, dark green with paler blotches. Its presence was a new record for the area. A bright blue flowered herb in the undergrowth was *Pycnostachys umbrosa*, one of the Labiale family.

We returned by the same route, quite speedily, to the Namanga River Hotel for drinks and lunch. Our thanks to the organisers of this outing for introducing us to another area of Kenya of great beauty and interest and also for arranging a warm dry day away from the Nairobi rains!

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PICCADILY CIRCUS IN THE MARA

Among Kenya's game areas, the Mara supports the largest biomass. It is the place to go to see game in large numbers and in great variety. The Mara's carrying capacity is rapidly deteriorating. The environmental impact of vehicles and tourists - roads, airfields, camps and hotels is considerable. The factors with the greatest environmental impact are the total lack of track discipline, the accumulated amount of rubbish and the harassment of game.

The tourist potential of this area could be utilized at present levels of human density, including the Masai, the tourists and those employed in the tourist industry together, if a set of rules is introduced and their observance is enforced.

1. Off track driving must be controlled if not prohibited altogether. Those who think that the soils and vegetation of the Mara will not suffer from the effects of off-track driving (as Amboseli demonstrably did) tend to forget that the question is that of quantity: any range can be destroyed by driving over it. Even the tracks in the Mara, if one accepts the mere presence of tyre tracks as evidence of a measure of legitimacy, have changed the drainage pattern and has already created a disturbing amount of erosion e.g. the road into Musiara just outside the designated game reserve. The constant off track driving has become a matter of principle for some of the drivers; one can observe that some only use tracks occasionally and reluctantly. One can encounter those who search for cheetah by driving for hours at great speed round and round far from any track, and if one takes the trouble to examine the damage they cause, one finds that they have torn out the grass, stripped young bushes, broken emerging trees, driven over bird nests and insect colonies not to speak about the fright they have caused to hares, night jars, snakes and more often than not the very cheetah they are looking for.

Egged on by urbanised barbarians, who know little about nature and its fragility, these gentlemen drivers in command of several hundred horse power each are in the process of destroying a not inconsiderable proportion of the vegetation, firstly by driving over it, and secondly by accelerating the run off of water from the hillsides.

2. Whether the vehicle is off track or on track, the people in it are bound to discard rubbish all the time. Cigarette butts may be regarded as biodegradable as are chicken bones and banana peel, but whilst none of these are decorative, the problem is not that of aesthetics alone. Most rubbish is not biodegradable as much of it consists of glass, metal and plastic. The trouble is that people seem to think that Africa is ever so big, one beer can, one coca cola bottle, and one film wrapper will not do any harm. Imagine if we achieve the goal of one million tourists a year and each of them discards just one of these items every day!

Forget aesthetics and do not try to calculate how many years it will take before you cannot look out from the car window any more. Consider the damage to animals instead. No self respecting farmer anywhere will ever discard the metal top of a beer bottle in the enclosure or on the field where his cattle are grazing. He will collect bits of metal and broken glass from his fields and curse the tourist who discarded it. He does not want these foreign bodies in in the gullet and the guts of his cattle because these objects may easily kill the precious beast.

No pet owning housewife is ever going to throw away a plastic bag, particularly if the bag has contained meat before, because she knows that if her dog swallows the bag it is liable to get a bowel obstruction.

And who would keep the drinking water of a caged canary or whatever pet bird, in a rusty container, when it is explained in all the pet shops and pet keeping manuals that rust is harmful to birds?

But Africa is big and the very people who would sue a brewery if the tiniest bit of glass broke off from their bottle of beer will throw innumerable bottles into the Mara River. And their Cicerone, the game run driver, for whom culturally, so to speak, a non biodegradable item of rubbish is a relative novelty, will do the same.

3. Knocked over tree saplings, torn out shrubs, squashed grass, flattened plover nests, hares and nightjars with nervous breakdowns or wildebeeste with perforated stomachs, siderotic ibises and hyaenas with bowel obstruction? All these dangers are real but as they are not immediately observable they are not considered to be important. There are planty of observable incidents of another kind, obviously harmful:

The chasing of hunting cheetah often leads to abandonment of the hunt and some cheetah never get used to motorcars driving onto their tails while they hastily feed. The dwindling number of cheetah in the Mara, and the increasing numbers in the neighbouring Serengeti (where there are very few tourists) are good demonstrations of the point. The rhino does not like to be woken up and coaxed to stand up for a photograph. If one ever saw an anxious leopard mother trying to bring food to her young and cannot get to the young because of engine revving motorcars, then one knows that it is not only poachers who threaten the survival of game.

These matters are not a question of sentimentality. Not all animals are like the lions in the Mara, whose amber eyes are full of indifference, if not disgust, as they gaze into these photographic lenses directed at them. Within twenty years the lions of the Mara became used to motorcars and the human voice (shrieks, giggles and laughter). Who knows, after another decade they may prefer to sleep in the tents?

The agent of destruction in the Mara is man. The cause of avarice, political expediency, ignorance, callousness and just plain bad manners. There are those who think that Kenya can absorb many millions more of tourists and cite the example of Spain where the resident/visitor ratio is spectacular. The sun which those visitors worship shines with immutable vigour and unless those visitors manage to pollute that legendary azure sky and render it impermeable to the sun's rays, she will fry them: whether they come in dozens, thousands or millions.

To stick to the metaphor about Picadilly, what the Mara needs is a measure of what Picadilly has: Rules - their enforcement and education. If the elders of Narok Rural Council were less interested in the immediate income in concession fees and more in the preservation of this extraodinary corner on the globe together with the benefits their children might derive from it; if the tour operators and camp owners would not behave like miners or oil companies, but would husband the resources for the benefit of posterity, and if the drivers would not be like their cousins the matatu drivers, the future of the Mara would not be so bleak.

Here are some practical suggestions:

1. Education. Tourist, driver, game ranger and even the local Masai could be educated. To start with the Masai, he should get his dogs vaccinated against rabies (for his own and his cattle's benefit) and against distemper (for his own dogs, the hunting dogs and the bat-eared foxes benefit). He does not only need education, he also needs vaccines; and if he has access to that, he will co-operate as he does with most things - except of course, the curb on the number of his beasts.

The driver, sitting evening after evening in the quarters of the camp or lodge is a captive audience for education. He could be shown films, he could be given books, he could be lectured to and as most human beings are of reasonably good will, he will change a bit, maybe not much but he will. He will not throw bottle tops and tins around and if his employer provides the car with a litter bag, he, the driver will enjoy smilingly reprimanding those big-headed wazungus when they are about to discard a bottle.

The driver will still drive off the track and will chase the cheetah. After all, he is offered handsome sums of money to find photographic trophies. The tourist can be educated too. He can be given a brochure and in the brochure the story of the nervous cheetah and the resting rhino can be explained. He can be told that running cost energy and that to replenish energy, animals need food and time and leisure to eat. True, there will be many among the tourists who will say: "Just this once will not make any difference": but in every car or mini-bus, there is likely to be a young couple or a dear old lady who will protest on the cheetah's, the rhino's or the leopard's behalf.

The game rangers in the Mara need to be educated too. They do not know these things either. They can be seen perching next to drivers, directing the race for the largest number of lions in the shortest time, and even if the tourists and the drivers sit quietly looking at something interesting, should there be two game guards about, they are sure to entertain each other gaily and loudly, with whatever makes them gay and loud - the football news perhaps.

Education will achieve a lot but not all. Rules have to be laid down, rules about track discipline, about minimum distance from certain kinds of game, about speed, numbers of cars converging on any discovery and an absolute prohibition on any litter (including prescribed methods of litter disposal at lodges and camps).

Having made rules, these rules need to be enforced. This does not require helicopters and radios. It requires good rangers in strategic positions, on the tops of hills equipped with simple telescopes. It requires a few senior rangers who are appointed on merit and not for other reasons.

Education and rule enforcement costs money. Where should the money come from? Presently the foreign tourist pays KShs.30/- for which sum he can stay in the park as long as he likes. Some of the camps are outside the reserve and game drives do not cost any entrance fee; either because the drive is outside the reserve or because one can nip in and out without any effort. The entrance fee could be doubled or trebled or made KSh.100/- for 48 hours or thereabouts. Tour operators and lodge owners and their lobby oppose any increase in park fees. They claim that higher park fees would discourage tourists from coming. One wonders how much on average tourists spend on park fees during their stay? And how much more do they spend on drinks?

By all means, raise the fees, enlarge the reserve, make use of the land for tourism more profitable. Then perhaps that quick ploughing, a few years of wheat growing and then abandonment of the land to wind and weed will cease to be a temptation.

If we have Picadilly Circus in the Mara, so be it. But let us have an orderly and clean one, more orderly and clean than its namesake in London. Civilised traffic requires mutual respect among the crowd. Let us, in the Mara, respect the interests of nature, for the sake of which we claim to travel there in the first place.

Imre Loefler, Box 47964, Nairobi.

Should the author of this essay be asked to do so, he will be happy to contribute to educational material for drivers, tourists, game rangers, Masai and even Civil servants or Politicians.

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CRESCENT ISLAND VISIT

On Sunday, 13 July, the Society held an 'organised Pot Luck' outing - the destination Crescent Island at the invitation of Jean Hayes. So it was lucky 13th for over 100 members of the Society who converged on a rather bemused Jean waiting on the South Lake Road to take the group across to the island "Are there many more?" she asked politely.

It was a sparkling day, bright sunshine after what seemed interminable grey skies round Nairobi, and the island was at its best. The lake looked lovely from the vantage spot of Jean's cottage and one could view its glass-like surface through the new green of yellow-barked acacia leaves. Hank Beentje and Ann Birnie were there in force, happily stuffing botanical specimens into large plastic bags. Fleur Ng'weno, binoculars ever at the ready, led an impromtu bird walk for a delighted group. Cecelia Gichuki was anxious to see the Crested Cranes, as she and her husband are doing research on these birds in Kenya. Jean gave a fascinating resumé of the history of the Island and led a walk along the lake edge where there were water birds in plenty. Water buck peered curiously through the trees, not too alarmed by the spread of people, but keeping a safe distance. There seemed to be a glut of Fish Eagles, each guarding quite small territories, so the fishing must be good; their ringing calls filled the skies. Members seemed happy to do their own thing and split up into several groups, while some just snoozed on the lush green lawn by Jean's cottage.

It was generally a good day, and thanks to Jean for her welcome and her patience in answering so many questions from so many people.

D. Brass, Box 59106, Nairobi

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FLORA OF TROPICAL EAST AFRICA

The following new parts of the Flora of Tropical East Africa are available at the E.A. Herbarium (National Museums) and also from the Office of the EANHS :

Amaranthaceae	Sh.250/-	Salicaceae	Sh.30/-
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SOCIETY ANNOUNCEMENTS

DONATION: From Kaplan & Stratton, Advocates, Queensway House, Nairobi.
The sum of KSh.5000/- at the request of the beneficiaries of the Estates of the late Igidio Minoli and A.A. Vittorio Celiento, two Italian gentlemen who died in a motor accident while in Kenya on holiday.

The Society is most grateful for this donation, which will be put towards the publication of papers in *The Journal of the East Africa Natural History Society and National Museum.*

EANHS NEST RECORD SCHEME: Mr G.R. Cunningham van Someren, Box 24947, Nairobi will be looking after the Nest Record Scheme between August and December 1986, while Mr P.B. Taylor, the Nest Record Scheme Organiser, is on overseas leave

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This offers you free entry to the National Museum, Nairobi; free lectures, films, slide shows or discussions every month in Nairobi; field trips and camps led by experienced guides; free use of the Joint Society-National Museum Library (postal borrowing is possible); reciprocal arrangements with the Uganda Museum, Kampala; family participation; wives and children of members may attend most Society functions; one copy of the EANHS Bulletin every two months; a copy of each Journal published during your period of membership; the Society controls the ringing of birds in East Africa and welcomes new ringers and runs an active Nest Record Scheme; activities such as plant mapping and game counting are undertaken on a group basis. Membership rates are given at the foot of this page.

JOURNAL

The Society publishes The Journal of the East African Natural History Society and National Museum. Each issue consists of one paper, however, sometimes two or more short papers may be combined to form one number. The aim of this method of presentation is to ensure prompt publication of scientific information; a title page is issued at the end of each year so that the year's papers may be bound together. Contributions, which should be typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five reprints of their article free, provided that these are ordered at the time the proofs are returned.

E.A.N.H.S. BULLETIN

This is a duplicated magazine issued six times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (EANHS Bulletin), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

SCOPUS

The Ornithological Sub-Committee publishes this bird journal five times a year. Cost: EANHS members KSHS.75/- p.a. All correspondence to D.A. Turner, Box 48019, Nairobi, Kenya.

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BULLETIN

A publication of the East African Natural History Society, Box 44486, Nairobi, Kenya. Price 10 shillings.

EANHS BULLETIN Volume 16 (4) November 1986

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PRELIMINARY OBSERVATIONS OF SYKES MONKEYS

The mitis monkey *Cercopithecus mitis* is a wide ranging guenon distributed throughout central, eastern and southern Africa. In Kenya , there are two types of *C. mitis*; *C.m. stuhlmanni* or the Blue Monkey, inhabitating areas west of the Rift Valley and the Sykes monkey, ranging east of the Rift Valley. Although the taxonomy of the Sykes monkey is confused, there are three subspecies which are generally recognised: *C.m. kolbi* in the eastern highlands; *C.m. kibonotensis* in southeastern Kenya into Tanzania; and *C.m. albotorguatus* from the northern Kenya coast.

Although Sykes monkeys are not uncommon, there have been surprisingly few studies of their ecology, biology or behaviour. In an attempt to increase our knowledge of these animals, we have been casually observing two troops of *C.m. kolbi* since April, 1986. The study site is the Ololua Forest, a 132 ha patch of one of the few remaining indigenous forests in the Nairobi vicinity.

Each troop contains one fully adult male in addition to several adult females, subadults, juveniles and infants. Troops do not appear to be very cohesive since the number of individuals counted during each observation bout is highly variable. The animals are dependant on water and are never found far from a water source. Perhaps related to this is their tendency to spend a considerable amount of time on the ground. Each troop occupies a discrete territory, but opposing troop members display only mildly aggressive territorial behaviour towards each other and we suspect that the territorial boundaries are not rigidly respected.

We have concentrated our preliminary observations on the feeding ecology of these monkeys. The following is a summary of our data:

Month	Botanical Name	Part Eaten
April	*Teclea simplicifolia*	floral buds
	Maytenus heterophylla	leaf buds
	Acokanthera oppositifolia	red fruit
May	*Grewia similis*	flowers/ripe fruit
	Croton megalocarpus	green fruit
	Clausena anisata	red and green fruit
	Strychnos henningsii	floral buds
June	*Schrebera alata*	green fruit
	Croton megalocarpus	green fruit
	Euclea divinorum	green fruit
	Zecheria scabra	green fruit
July	*Senecio petitianus*	floral buds/yellow flowers
	Schrebera alata	white flowers/green fruit
	Teclea simplicifolia	floral buds
	Clausena anisata	leaves/fruit
	Ficus	green fruit
	Teclea triocarpa	young leaves
	Acokanthera oppositifolia	young leaves
	Dombeya burgessiae	fruit
	Vernonia brachycalyx	leaves
	Grewia similis	fruit
	Carissa edulis	green/red fruit
August	*Olea europaea*	leaves
	Ficus	fruit/leaves
	Drypetes gerrardii	green fruit
	Dombeya burgessiae	fruit
	Schrebera alata	green fruit
	Teclea simplicifolia	dried fruit
	Teclea trichocarpa	young leaves
	Caleodendrum capense	green fruit

	Viscum triflorum	berries
	Brachylaena huillensis	leaves
	Maytenus heterophylla	leaves
	Olea africana	leaves
September	*Dombeya burgessiae*	fruit
	Croton megalocarpus	fallen fruit
	Viscum triflorum	leaves
	Drypetes gerrardii	green and yellow fruit
	Teclea simplicifolia	green fruit/leaves
	Schrebera alata	green fruit
	Caleodendrum capense	green fruit
	Tarenna graveolens	floral buds/green fruit

As can be seen, these monkeys have a diverse diet! We plan to continue our observations for at least another year and will include behavioural observations. We would be interested to hear from anyone with information about Sykes' monkeys.

We wish to thank Geoffrey Mungai and Mr Ndegwa of the E.A. Herbarium for their generous assistance.

Erna Tarara and Ochiago Odhiambo, Institute of Primate Research, National Museums of Kenya, Box 24481, Nairobi.

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CROCODILE IN LAKE EDWARD, UGANDA

We spent eight months in Uganda during 1986, making a film about the situation of wildlife in this country. During our last stay in the Queen Elizabeth National Park, we made a remarkable discovery: on the lower Mweya Peninsula, a crocodile suddenly emerged on the water surface. With a length of about two metres it stayed motionless, diving several times and showing its head again at the same spot. We were surprised. As far as we know, this was the first record of a crocodile in Lake Edward.

It is thought to be 8,000 to 10,000 years ago when crocodiles last lived in Lake Edward. Some fossil bones and teeth, found at Lake Edward and Lake George, proved the early existence of crocodiles in these lakes. During those early days Lake Edward had a broad connection to Lake Albert. After a period of volcanic activity the two lakes separated. It is still a riddle why the crocodile and other Nile fauna did not survive at Lake Edward and the nearby Lake George. Today, the nearest crocodile population is found in Lake Albert. Although the Semliki River, which acts partly as the border with Zaire, forms a connection between Lake Edward and Lake Albert, it is believed that the falls in the northern part of the river, surrounded by dense rain forest are a strong natural barrier for migrating crocodiles.

It was no wonder: nobody would believe our story, when we told about this happening at the Mweya Safari Lodge. "You must have seen a long monitor lizard" was the response. The following day we invited the Chief Warden and the Anti-Poaching Warden of the Park to accompany us down to the lower Peninsula. Of course it was not certain that we would find the animal again. But fortunately after a few minutes search we found the reptile nearly at the same spot, where we had left it the day before. So at least four persons saw this single crocodile in Lake Edward.

The remaining question is: how came the crocodile to Lake Edward? Either somebody released a captured animal into the lake (which is very doubtful in present day Uganda) or this crocodile migrated from Lake Albert, passing somehow along the Semliki River. To get an answer to this question would seem to be impossible unless other crocodile follow in the near future. Nevertheless it will be very interesting to see whether it can survive in Lake Edward.

Derek Pomeroy adds: in the past few weeks, reports have reached Dr Eric Edroma, Chief Research Officer of the Uganda Institute of Ecology, of several more sightings in the region of Ishango, where the Semliki River leaves Lake Edward.

Wilhelm Möller, c/o Uganda Institute of Ecology, Box 3530, Kampala, Uganda.

ADOPTION OR RECLAMATION?

On Saturday September 13, 1986 I inadvertantly cut down a nest of the Common Bulbul *Pycnonotus barbatus* which had been built within a clump of mistletoe. There were two fledglings in the nest at the time. One fell fluttering to the ground while the other hopped/flew into the tree canopy. I retrieved the one on the ground whose state of fledging was such that I was sure he would not survive (the tail feathers had just emerged, being 2 - 3 mm long, he was unable to fly), and fed him on a mixture of poached egg, bread, chickpeas and finely diced cooked meat.

He survived well and grew fast. On 18 September, five days later, I took him to the garden for flying lessons. Five minutes later we were mobbed by a pair of bulbuls who, I am convinced, were the parents. I immediately retreated and observed them feed and lead "my" fledgling for 1½ hours with that fluttering "follow me" behaviour.

Initially the parents were very agitated, one remained as sentinel in a prominent position, while the other approached the fledgling. Both were chattering loudly and autopreening nervously. Five minutes later an adult approached the fledgling and allopreened it (I was a poor parent, it was covered in food debris and unable to autopreen yet). Ten minutes elapsed before an adult mock fed the begging fledgling and fifteen minutes elapsed before an adult brought back and fed it a large titbit (unidentified) In the subsequent 75 minutes, I observed 12 instances of feeding a variety of insect material and one instance where leading occurred with food in the adult's beak. Other instances of leading were without food.

The fledgling moved or was led a total of 10 m towards where I had last seen his sibling in a thick kai-apple hedge. The parents then did not return though I observed until dark, over an hour later.

Three days later my wife saw the parents with another fledgling - possibly the sibling? I did not have an opportunity to repeat the experiment since the fledgling had damaged a wing and I did not want to expose him in that condition. He fell heavily two days later after losing balance and died (from internal injuries I assume) the next day.

I have seen instances of adoption in a colour-ringed population of the Arabian Babbler *Turdoides squamiceps* where a group happens upon a lost fledgling and successfully rears it. However, whether this is a case of adoption or recognising ones own is a matter for speculation.

Tony Larkman, Box 24856, Nairobi.

BIRDING IN KENYA

Field experience in identifying birds is an absolute necessity in birdwatching Yet some sort of guide must help to identify the birds, as the ability, by no means instinctive, requires learning. Having in mind that identifying a bird notwithstanding inadequate viewing conditions (as when having to identify a bird from a single glance, or by its songs or calls alone) is probably the most perfected form of birding (note the loss, by atrophy, of the "-watch-" of *bird*watch*ing*); it can be said that the most efficient method by which to obtain field experience is to be always accompanied by one or more persons who are already able to identify all or most birds (of an area) at a glance or by ear.

Kenya is fortunate to have this service readily available: from the free "Wednesday morning Birdwalks" and "Informal Outings" led by Fleur Ng'weno in and around Nairobi, the bird tours led by Terry Stevenson (Lake Baringo and other areas), Tim Barnley's bird guides (Kitale-Kapenguria area), African Birding Ltd. and East African Ornithological Safaris Ltd. (various parts of Kenya), and others.

Field guides and videotapes (there are at present two "Video Guides" available, and two more, at least, in preparation, to the birds of North America north of Mexico) are rivals for the second place of efficiency in guiding field identification, each with its advantages and disadvantages over the other.

Well made videotapes can show everything that a field guide's illustrations can show, in addition to depicting the bird's movements and voice. The main disadvantages are that one cannot view a videotape in the field and that one cannot "zoom into" the desired birds, or bird distribution maps, as one can do in an indexed field guide; especially in one that follows the "facing page format" where all the information on a certain bird or birds is to be found within two facing pages.

These are the main advantages in a field guide: the disadvantages are that it can *never* imitate or transmit the idea of a bird's voice accurately (pers. obs.), and that, even when it contains various accurate illustrations of one species (quite utopic in itself; ideally, a field guide illustration should not only depict accurately the colours and pattern, but also the shape and build of a bird to enable identification to be possible at a mere glance), the field guide can never depict the bird's characteristic motion or behaviour adequately. In the case of bird sounds, a field guide can be complemented by a recording (such as Stuart Keith's *Birds of the African Rain Forests*); these usually have more or less the same disadvantages as videotapes, though cassettes and a tape recorder may be easily taken into the field.

Another type of identification guide, which I do not dare call a field guide, is exemplified for Kenya by "Mackworth-Praed & Grant", "Jackson", *Birds of Africa* and a host of other large books, many of them from colonial days. Such books may be very useful as reference books but are difficult to take to the field and, in the case of the guides of this sort from the days when Kenya was a colony, would be of limited use anyway, as most birds are treated in such a way as to be identifiable only with the bird in the hand, as with the aid of a gun (in those days) or a mist net (which replaces the gun in our day).

Ray Moore's *Where to watch birds in Kenya* is useful in terms of indicating places in which to find birds but except for the few line drawings, Ray Moore's book does not contain hints on identification. I would fully recommend Adrian Lewis' articles: Ten Great Places to See Birds in Kenya, parts 1, 2 and 3 *EANHS Bulletin* 1983: 65-71, 83-87 and 1984: 71-72 which, besides complementing Ray Moore's book in the descriptions and birdlists of the various areas included, is especially useful in that it "tells birdwatchers where there are like-minded people who might significantly enhance their birdwatching" in the areas described. This is not simply a luxury, it is extremely useful, almost necessary for a complete birding trip.

Having only touched on the general advantages and disadvantages of field guides, it should be said that they are the aids to bird identification most frequently used in Kenya. At present, there are two widely used field guides to the birds of East Africa (and therefore Kenya): *A Field Guide to the Birds of East Africa* (1980) by John G. Williams & N. Arlot (a much improved and revised version of Williams' earlier *A Field Guide to the Birds of East and Cnetral Africa* with the addition of the "rarer birds" section of his 1967 *A Field Guide to the National Parks of East Africa*), and C.A.W. Guggisberg's *Birds of East Africa*. Both of these solve the problem of the limitation of treatment imposed by the more than 1,300 species of birds by omitting many. In both, it is foreseen that the user will be familiar with Eurasian species and will carry a European or Eurasian bird guide (such as *A Field Guide to the Birds of Britain and Europe with North Africa and the Middle East* by H. Heinzel, R. Fitter and J. Parslow, or *Birds of Britain and Europe* by B. Bruun and A. Singer).

Williams treats almost all the species (except most seabirds and some species only recently added to the East African list). Field marks and illustrations of almost all Eurasian bird species (only named in most cases, and with distribution and abundance mentioned in a few cases), but females of many other species are missing. The book contains descriptions and colour illustrations of just over half the species treated, though very often only one plumage is shown. The illustrations are quite good on average, though there are a few errors that should be pointed out.

One error is the yellow-backed and dark-beaked illustration of the Black-headed Oriole, which is supposed to be in adult male plumage, yet dark beak and black head, nape and throat only occur together at a certain stage in the growth of immature males in which faint streaks show on the side of the breast; furthermore, the species always shows an olive-green, not yellow, back at all stages and in both sexes. The Golden Palm Weaver should look like the Taveta Golden Weaver, and the latter is better illustrated in the National Parks Field Guide. The main field mark of the Fischer's (now, Olive Mountain) Greenbul, the prominent large cotton-white throat patch that I have seen in forms from Nairobi, Mount Kulal and elsewhere in Kenya, and therefore is widespread, is not depicted at all in the illustrations (although it is in the picture of the Red-tailed Greenbul). I don't think much of the illustrations of the Dusky and Grey Flycatchers or the Brown-chested Alethe or the Retz's Red-billed Shrike or the Black Cuckoo-Shrike. The picture of the female of that species lacks the black, white and brown face pattern which immediately identifies a female Black Cuckoo-Shrike in an otherwise inadequate view. It lacks the prominent bars on the vent and the characteristic pattern on the upper wing-coverts. The illustrations of the male Black Cuckoo-Shrike shows gape and wing patch, and although the text mentions that only some males have a "small, yellow patch on shoulder" (which is perfectly true true), it treats the yellow gape wattles as a field mark although more often than not they are not visible, perhaps because they are brightly coloured only when the bird is excited, and in fact I only recall seeing them bright reddish-orange, not yellow.

Notwithstanding the few errors and omissions such as those mentioned here, "Williams 1980" is at present the most complete and most widely used field guide in Kenya. In many cases the text of the field guide is adequate for field identification, though at times, notably in the case of "allied species", the description of a bird does not clearly indicate a difference from other species. This creates the "difficult species groups".

Birds of East Africa by the late C.A.W. Guggisberg has only had one volume published, due to the untimely death of the author. Therefore, only non-passerine birds are included. This field guide only has illustrations and descriptions of 325 species of birds, about half the number of species illustrated in "Williams". There are very brief descriptions of almost 100 more species not illustrated and scant mention of Eurasian species. Due to its more limited scope, this book is useful only to complement "Williams" as it does contain illustrations either omitted or inadequately illustrated in Williams including a few females. *Birds of East Africa* by Guggisberg does have some misleading illustrations too, the most noticeable being the Green Ibis, shown as almost identical to the Hadada Ibis in shape and colour, which it is not.

Whereas identification down to species level, or even further, is usually desired when birdwatching, the current field guides to the birds of East Africa sometimes only allow identification by elimination down to two or more allied species: for example, with difficult groups such as some larks, pipits, greenbuls, flycatchers and cisticolas. Usually one has to refer to other sources, and as one is not always accompanied by someone who can already identify those birds, one will have to rely on good field observation coupled with library or museum research.

Fortunately, notes on the identification of certain difficult species-groups have been published in magazines and journals (such as honeyguides, greenbuls, Spotted Eagles, Squacco Herons and others in *Scopus* and cisticolas, Double-collared Sunbirds and others in the *EANHS Bulletin)*. It would be advisable to publish more articles with such information (often gained through field experience by amateurs), and to make a survey of all available relevant information, such as field guides and other guides, articles on difficult species-groups, unpublished data of various experienced birders, monographs such as *Herons of the World* by Hancock & Elliott, *Woodpeckers of the World* by Lester Short, *Seabirds of the World* by Peter Harrison, *Birds of Africa* and Museum skins to make a more complete field guide to the birds of Kenya or of any other area, for that matter.

Hector Gomez de Silva Garza, Xola 314-E, 03100-Mexico, D.F., Mexico.

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JUDY RUDNAI'S TREE HYRAXES - SUNDAY 31 AUGUST 1986

About 25 members and 4 visitors from the Sudan, went to Judy Rudnai's house, out on the Athi plains, to have a look at her captive Tree Hyrax and to learn a little about these animals that she has been studying for many years.

The plains were drying to a dull gold. It was a gusty day, with clouds occasionally covering the sun, and the birds decided to stay hidden when we took a walk alongside the gorge. A Grey Cuckoo Shrike, identified by song rather than by sight, was seen to plunge into dense bush. Climbing up from the gorge, near the sisal factory, debris from the prepared sisal was lying around and there was a seepage of water. Sacred Ibis, one Hadada and a few Cattle Egret obviously found this situation highly to their liking. However, when someone got out of a car, about 20 waders flew up; Common Sandpiper were positively identified, and it was thought that the white rumps most probably belonged to the Wood Sandpipers, and maybe there were Ruffs as well. So the migrants are filtering back.

At the house we lunched on the lawn and then Judy gave a fascinating chat about the Hyrax. Apparently the best way to identify Tree Hyrax from the others, is to look at the shape of the penis. Makes identification a little tricky! Judy has a hide in the large cage where her Hyrax live, and she has hollowed out sisal stems and hung them up around the cage, and they make perfect Hyrax beds. The Hyrax have bred several times but it is only the dominant pair who breed.

Trying to dispel prejudices, Judy put in a good word for snakes, which she has also studied.

To round off an interesting visit, we were provided with a mammoth 'high' tea; and my, did that iced tea taste good.

Thank you very much to Judy Rudnai for making her home available to the Society and allowing members to intrude into the peace of her wild surroundings. We hope our Sudanese visitors also enjoyed the trip.

D. Brass, Box 59196, Nairobi.

BIRDWATCH KENYA'86

BIRDWATCH is alive and well. Not only that, but bigger than before, with seven teams competing against each other over a 48 hour period on the last weekend of November 1986. From midnight on Friday to midnight on Sunday, each team of three will race around the country in an effort to spot as many birds as possible. This 1986 birdwatching marathon is an international event, with teams coming from five countries (2 from Kenya, 2 from UK, and 1 each from Holland, Zimbabwe and USA).

The event has been changed to run over a 48 hour period as many of the competitors are coming many thousands of miles to be here, and this will enable them to have two attempts at the world record over 24 hours, which currently stands at 331 (set in Peru by Ted Parker).

Again, the principal object of the whole exercise is to raise funds for Gertrude's Garden Children's Hospital. This will be done in the same way as before - by means of pledge forms, members of the public pledging so much per bird for the team of their choice. Pledge forms have been widely distributed both locally and overseas, and will be available over the weekend for anyone who has escaped the distribution net. All administrative costs are being met by the Insurance Company of East Africa, who are celebrating 21 years of operations in Kenya. In addition, the commercial sector is lending generous support to the individual teams, to meet the costs of their air charters, car hire and accommodation during the event. British Airways have generously given eight tickets which has considerably helped in getting the competitors to Kenya, and Kenya Airways have given substantially reduced rates for the competitors from Zimbabwe.

The two local teams are as they were in 1984 - Terry Stevenson, John Fanshawe and Andy Roberts will be defending their Kenya and African Record, hotly pursued by Don Turner, David Pearson and Alan Root. Both British teams have chosen to have a local representative, with Dave Richards joining David Tomlinson and Bill Oddie, and Neil Baker joining Richard Howard and Martin Woodcock. The Zimbabweans Rhett Butler and Peter Mundy have enlisted Adrian Lewis on to their team. Only the Americans and the Dutch are truly 'national' teams - the Americans Will Russell, Dale Zimmerman and Bob Behrstock and the Dutch Jan Mulder, Klaas Eigenhuis and Kees Tiemstra.

The rules have been slightly changed from last time, in that the restriction on heard species has been lifted and these are no longer limited to 10% of the total. The event must take place within the boundaries of Kenya, and both the two birders of each team must see and hear every species, and be within speaking distance and sight of each other at all times. Birds must be alive, free and unrestrained, and no nets or taperecorders are allowed to lure them.

The event will centre at Nairobi's Norfolk Hotel, where the control room will be manned throughout the weekend. Each team will be in radio contact, and will send in their scores on a regular basis. The finish at midnight on Sunday 30 November will be an exciting time, and scores are sure to be close. Final results will be announced on Monday 1 December after the lists have been checked and agreed by the committee's independent arbitrators.

BIRDWATCH 86 promises to be the birding event of the year, and it is hoped that the public, and members of the EANHS in particular, will support it in every way possible. Further information and pledge forms available from BIRDWATCH 86, Box 48541, Nairobi.

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BOOK REVIEW

AMONG PREDATORS AND PREY. By Hugo van Lawick,, 1986. London: Elm Tree Books, Hamish Hamilton. pp. 221 including copious colour illustrations. Available from The Kenya Museum Society at a reduced price of Sh.550/- to members of the EANHS.

Hugo van Lawick was recently in Nairobi signing copies of his book and very kindly donated a signed copy to the library of the East Africa Natural History Society.

The incredible photograph on the cover, of a Thomson's Gazelle making a desperate attempt to escape from a Hunting Dog, gives a good indication of the excellence of the photography in the book. Those who have the good fortune to know and love East Africa will be delighted with this latest tribute, and to those less fortunate, it can only make them long to visit and to see for themselves the wide vistas and unsurpassed wildlife.

Mr van Lawick knows his country well; he has lived in tents close to the land for 25 years. He does not intrude into the lives of his subjects, but has become part of their existence and because of this, his photographs have depth and understanding and are taken with the critical eye of a true artist, and as an artist he is never satisfied. There are some delightful tales resulting from his close and careful study of animals. For example. a jackal cub not careful enough to watch which mushrooms his parents were eating, ate the wrong variety and started to hallucinate, chasing large animals and generally behaving in a crazy manner. Also, van Lawick got rather a surprise while standing under a tree when it started raining pigmy mice, their tiny 2.5 cm bodies plumetting to earth in a frantic attempt to avoid a Boomslang in the branches.

It is interesting to learn the philosophy of this fine photographer and of his deep concern for conservation. His love and admiration for Tanzania, the country that has honoured him by making him an honorary resident for the rest of his life, shines through the words and the photographs.

This book is a must for anyone whose spirit has ever been stirred by the drama of an African sunset or the vastness of its plains; who has been entranced by the behaviour of little creatures in their natural habitat, or awed by the grace of the cheetah's chase.

D. Brass, Box 59196, Nairobi.

JOURNAL OF THE EAST AFRICA NATURAL HISTORY SOCIETY AND NATIONAL MUSEUM

Journal part No. 183: The following paper has recently been published and is available to interested members.

CYCLIC SEQUENCES OF VEGETATION IN PLANT COMMUNITIES OF THE ABERDARE MOUNTAINS KENYA. By A.D.Q. Agnew, University College of Wales, Aberystwyth.

PROTOAVIS THE ANCESTOR OF MODERN BIRDS?

The theory that *Archaeopteryx* was the ancestor of modern birds and that it launched into flight from the ground has been held for a number of years (*EANHS Bulletin* 1971:28). However, in 1984 a fossil, named *Protoavis*, 75 million years older than *Archaeopteryx* was discovered in a mud-stone quarry near the town of Post in Texas by Dr Sanker Chaterjee and associates of Texas Tech University (*The Times* Oct 14 1986). Only recently investigation has shown the fossilized bones to be those of an early bird.

Chaterjee states that two skeletons were found, that of an adult, which was about the size of a crow, and also a baby. Unlike *Archaeopteryx*, with which it shares many characteristics, it has a wishbone and a well-developed sternum which indicates the powerful muscles needed for flight and it also has a long coracoid bone, like modern birds but unlike *Archaeopteryx*.

Protoavis has well-defined claws at the extremities of the wings like those of a tree climber, whereas *Archaeopteryx* had wing processes more suitable for catching and slicing up prey. All this indicates that perhaps flight did indeed have arboreal origins as was originally postulated.

The findings are to be presented to the Society of Vertebrate Palaeontology in November this year. It will be most interesting to hear what conclusions are reached.

Daphne Backhurst, Box 24734, Nairobi.

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JOURNAL

The Society publishes The Journal of the East African Natural History Society and National Museum. Each issue consists of one paper, however, sometimes two or more short papers may be combined to form one number. The aim of this method of presentation is to ensure prompt publication of scientific information; a title page is issued at the end of each year so that the year's papers may be bound together. Contributions, which should be typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five reprints of their article free, provided that these are ordered at the time the proofs are returned.

E.A.N.H.S. BULLETIN

This is a duplicated magazine issued six times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (EANHS Bulletin), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

SCOPUS

The Ornithological Sub-Committee publishes this bird journal five times a year. Cost: EANHS members KSHS.75/- p.a. All correspondence to D.A. Turner, Box 48019, Nairobi, Kenya.

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IS THE CROCODILE MAKING A COMEBACK ?

The Nile Crocodile *Crocodylus niloticus* together with most nilotic fish fauna e.g. Nile Perch *Lates nilotica* are believed to have lived in Lakes Edward and George at least up to 7000 years ago, a very short time span by geological standards. It is thought that they were killed out by dust and poisonous materials produced by short-lived but extraordinarily violent volcanic eruptions. The ecological niche left vacant by the demise of the crocodiles seems to have been conveniently occupied by the Monitor Lizard *Varanus niloticus*.

On 27 April 1986, a German biologist, Peter Moller, reported sighting a crocodile near a sandy beach at a point where Peninsula Bay opens into the rest of Lake Edward (Fig. 1, Site A). One of us (V.K.) and others including a park warden were initially sceptical, but on visiting the place, they saw the crocodile. A few days later (P.K.) also visited the site, and sure enough, the crocodile was there. The excitement of seeing a crocodile in Lake Edward lingered on for some time and all sorts of hypotheses were suggested to explain this unusual phenomenon. The most bizarre of these, proposed by some of the local people was that the crocodile was a "djin" or a person, who was capable of turning into a crocodile form whenever he wanted.

On 24 July 1986, while talking to an American Scientist, Dr P.G. Williamson of Harvard University, currently studying fossil snails in Eastern Zaire, he mentioned that crocodiles had also been sighted at the source of the Semiliki River (Fig. 1, Site B)to the great surprise of the local people there. It began to look as if the Mweya crocodile was no person after all !

On 16 September 1986, while making counts of large water-birds and hioppos along Kisinga Channel, we saw a young crocodile which we estimated to be about 1.5 m long. It was basking in the sun on a sandy beach on the southern bank of the channel (Fig. 1, Site C). On seeing and /or hearing us, it slid into the water. The same crocodile or at least one of the same size was again seen at the same place by P.K. on 10 October and 14 October 1986.

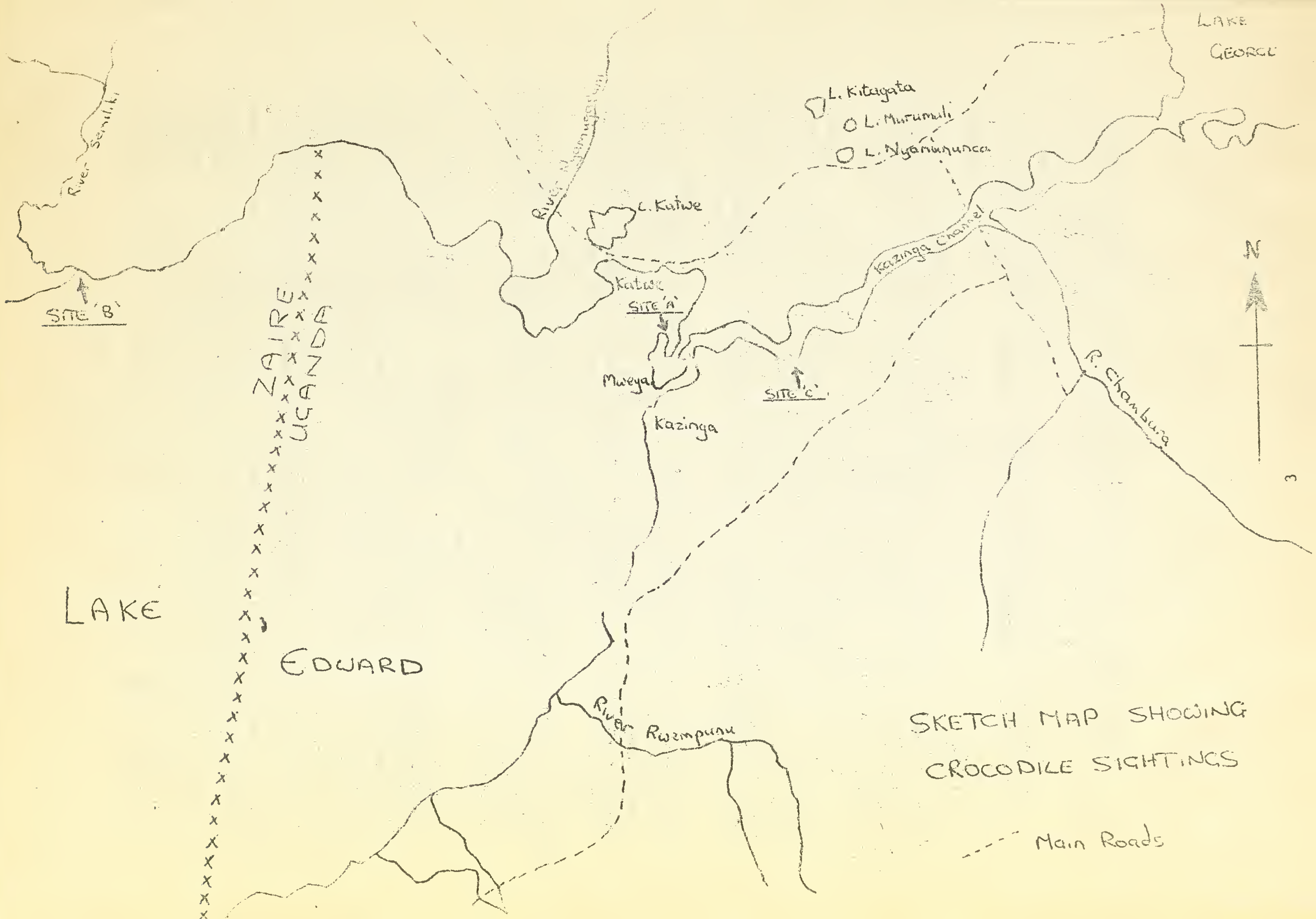
From these records, we began to ask ourselves whether the crocodile was making a comeback to its prehistoric haunts. Beadle (1954) suggested that the rapids on the Semiliki River together with dense forest on the banks could have acted as a barrier to recolonisation of Lake Edward by crocodiles, which exist in large numbers below the rapids. He predicted that clearance of the forest along the rapids section would enable the crocodiles to find their way up to Lake Edward and ultimately to Lake George through the Kazinga Channel.

We are not certain whether this explains the crocodile sightings we have made as none of us have been to the Semiliki recently to confirm whether any forest clearance along the banks has occurred. However, more records and a trip to the Semiliki will possibly go a long way to solving the riddle of the crocodiles in Lake Edward and Kazinga Channel.

REFERENCE:

Beadle, L.C. 1954. The Uganda National Parks in Prehistoric times 1 - Landscape changes pp. 121 - 124 in *Uganda National Parks Handbook* Kampala, Uganda: Longmans.

Pantaleon Kasoma and Vincent Kisembo, Dept. of Zoology, Makerere University/ Uganda Institute of Ecology, Queen Elizabeth National Park, Uganda.



SKETCH MAP SHOWING CROCODILE SIGHTINGS

LAKE GEORGE
River Semliki
SITE 'B'
ZAIRE
UGANDA
River Nyamugasani
L. Kitagata
L. Murumuli
L. Nyamunuka
L. Katwe
Katwe
SITE 'A'
Mweya
Kazinga
Kazinga Channel
SITE 'C'
N
R. Chambura
LAKE EDWARD
River Rwimpunu
Main Roads

LETTER TO THE EDITOR

Dear Sir,

In the November issue of the *Bulletin* Page 42, there was an article about crocodile in Lake Edward, Uganda.

Forty years ago, or more, the late E. Temple Perkins discovered a small crocodile in the Hoindagi River that flows into the eastern side of Lake George, which is connected to Lake Edward by the Kazinga Channel. This crocodile was identified as the Congo riverine species *Crocodylus osteolaemus tetraspis*. It had been previously unknown east of the Ituri forest.

I went to look for it myself, but found the river so full of angry hippo that I gave up my search after having had to shoot one old bull in the mouth as he was trying to eat me.

Anthony Dyer, Ngare Ndare, Box 477, Nanyuki, Kenya.

HIPPO/CROCODILE INTERACTION

During early October, when driving along the Tana River in the Meru National Park, my daughter and I witnessed a most unusual sight. About ten hippo were lying partially submerged in the middle of the river, which is fairly wide at this point. As we approached we clearly saw a six foot crocodile sliding into the water off the back of one of the hippo. As the sighting was most unusual we decided to investigate further and concealed the vehicle behind the river-bank vegetation. After about half an hour the crocodile was again clearly seen as it surfaced several times right in amongst the hippo, they showed total lack of concern over their strange companion.

Eventually, the crocodile climbed slowly from the rear end on to the back of one hippo, where it lay with mouth ajar for about ten minutes. Then suddenly we saw it sliding off the hippo into the water; this time the hippo got very agitated and scattered, splashing and grunting. The croc surfaced moments later with a big fish.

It would be very interesting to hear if similar behaviour has ever been observed before,

The crocodile must have learned to take advantage of the fish activity that is always associated with schools of hippo. The hippo could have learned to accept the reptile on their back as they accept a baby hippo, or a hamerkop walking about on their backs.

During a long weekend, at the end of October, I wanted to see if it would be possible to add further to our first observations, but in spite of long hours spent near the same school of hippo, no hippo/crocodile activity was seen.

Frants Hartmann, Box 633, Thika, Kenya.

ON THE SUITABILITY OF KENYAN ALOES FOR COMMERCIAL CULTIVATION

INTRODUCTION

In late 1986 there was some interest in Kenya in the possibility of using indigenous species of *Aloe* for large scale commercial purposes. A feature article appeared in one of the daily newspapers pointing out that a plant called *Aloe vera* is grown in the U.S.A. as a commercial crop (Wainaina 1986). There the leaf sap extract is used in the manufacture of various cosmetic products. Wainaina said that *Aloe vera* grows wild in Kenya in great abundance, and suggested that Kenya was missing out on a potential money spinner. In response to this article I wrote to the newspaper pointing out that *A. vera* does not occur in Kenya, and also that some Kenyan species of *Aloe* are of very local occurrence and could be made extinct if collected from the wild in commercial quantities (Newton 1986). Two weeks after the publication of my letter President Moi announced that aloes had been declared protected species in Kenya to avoid over- exploitation and environmental damage, and that henceforth only plantation-grown aloes were to be used commercially. This action was taken in response to a report of over-collecting of aloe leaves in the wild in some coastal regions, where the leaves are used for medicinal purposes.

About 350 species of *Aloe* are known. Most are found on the African continent, and others occur in Madagascar and the Arabian peninsula. There are 37 species recognised in Kenya at present, some of which are endemic. Throughout the range of distribution of the genus many species have been used as medicinal herbs since ancient times, and are still used by traditional healers (herbalists) today. Medicinal uses of aloe leaf sap include internal use as a purgative, and external use for treatment of various skin disorders.
In modern times it has been found to be very effective in treating radiation burns. The large scale production of cosmetic products based on aloe leaf sap is a more recent phenomenon, but is now big business in the U.S.A. One company marketing these products recently announced that income from sales had reached one million dollars in one day. The species used commercially, and grown in large plantations for this purpose, is *Aloe vera* (also sometimes referred to by the invalid synonym *A. barbadensis*). This species has been used as a medicinal herb for at least 2000 years, in which time it has been introduced to many tropical and subtropical countries, including the New World.

Aloes are xerophytes, i.e. plants adapted for surviving long periods of drought in arid regions. In the U.S.A. plantations of *A. vera* are found in the subtropical semi-arid states in the south, such as Texas. Establishing plantations of aloes could possibly be a way of using some of the land in Kenya that is too arid for most of the crops grown here. However, some thought should be given to the question of which species to grow. The quickest way to establish such a commercial project in Kenya would be to import material of *Aloe vera* and carry out field trials to determine its suitability as a plantation crop in various parts of the country. There is much to be said for the principle of exploiting indigenous species as they are adapted for survival here, having evolved in local ecological conditions; but are the indigenous species suitable for this purpose, and would they be successful plantation crops? These questions are examined below.

FACTORS TO BE CONSIDERED

1. PHYTOCHEMISTRY

The term "leaf sap" covers two kinds of fluid in leaves of aloes. These are the exudates (usually yellow) arising in cells associated with the vascular bundles, and the cell sap of the mucilaginous parenchyma that fills the centre of the leaf. Chemical analysis of leaf sap from various species of *Aloe* has shown that (a) the leaves contain a complete mixture of many different compounds, and (b) there are considerable differences between species in the chemical composition of the leaf sap (for a recent review and bibliography see Reynolds, 1985).

Recent studies on some Kenyan species have demonstrated chemical differences between the species (Cutler *et al.*, 1980; Reynolds, 1986a). It has also been found that there is marked chemical variation within some species (Reynolds, 1986a, 1986b). It is possible that leaf sap from Kenyan species is as good as that of *Aloe vera* for medicinal use and the manufacture of cosmetics. The fact that some species have been used locally as medicinal herbs for centuries demonstrates that they are of some value. However, any investigation into the possibility of using Kenyan species for commercial cultivation would have to include a study of the chemical composition of the leaf sap and an evaluation of its suitability for the intended use.

2. GROWTH HABIT

Only the leaves are harvested from aloes, and so from the point of view of a commercial grower the production of stems and flowers is a waste of valuable water and nutrients. This is especially so in arid regions, where water is a limiting factor. The commercially grown *Aloe vera* has rosettes of leaves growing from stems that are so short that they hardly appear above ground. Such a growth habit is ideal for the commercial production of leaf sap. Furthermore, these short stems sucker freely. The suckers are used for propagation, and so it is not even necessary to harvest seeds. On plantations flower shoots are removed as soon as they start to develop.

The Kenyan species of *Aloe* vary in growth habit from diminutive plants that are difficult to distinguish from grass when not in flower (*A. myriacantha*), to large trees with woody trunks up to 6 metres high (*A. ballyi*). Most species are quite unsuitable for use in plantations, and can be discounted on the following grounds.

Trees or shrubs with prominent woody stems, or sprawling plants with stems of one metre or more: *A. babatiensis, A. ballyi, A. cheranganiensis, A. confusa, A. dawei, A. fibrosa, A. nyeriensis, A. rabaiensis, A. volkensii.*

Plants acaulescent or with short stems (less than one metre), but growing as solitary rosettes or suckering only sparingly: *A. amudatensis, A. archeri, A. calidophila, A. chrysostachys, A. deserti, A. dumetorum, A. elgonica, A. erensii, A. juvenna, A. kilifiensis, A. lateritia, A. lensayuensis, A. marsabitensis, A meruana, A. morijensis, A. myriacantha, A. otallensis, A. pirottae, A. rivae, A. secundiflora, A. trichosantha, A. turkanensis, A. tweediae.*

We are left with only the following five species that are acaulescent, or have short stems, and sucker freely: *A. classenii, A. graminicola, A. macrosiphon, A. ruspoliana, A. ukambensis.* As far as growth habit is concerned these are the only Kenyan species that would be worth investigating as possible plantation crops.

3. LEAF SIZE

The leaves of cultivated *Aloe vera* are over 60 cm in length and up to 1.3 kg in weight when harvested. In plantations leaf size is enhanced by the frequent removal of suckers and young flowering shoots. It is also possible that there has been an element of genetic selection in the long history of cultivation of this species.

Reynolds (1966) gives the following leaf sizes for the five Kenyan aloes listed above as possible crop species (length and width at base):-

A. classenii: 35-40 X 7-8 cm; *A. graminicola*: up to 27 X 7 cm; *A. macrosiphon*: 60 X 8 cm; *A. ruspoliana*: 50-60 X 12 cm; *A. ukambensis*: up to 50 X 10-12 cm. It is interesting to note that his description of *A. vera*, based on naturalised plants growing wild in the Canary Islands, gives leaf size as 40-50 cm long and 6-7 cm wide at base. This would suggest that three of the Kenyan species, viz. *A. macrosiphon, A. ruspoliana* and *A. ukambensis* could produce leaves matching those of cultivated *A. vera* in length if treated in the same way in plantations. However, Reynolds' description of *A. vera* leaves also states "rather thick and fleshy", an expression not used in descriptions of the other species. Even if it seems likely that leaves of greater length could be produced on Kenyan species in cultivation it is not certain that the leaves would be as thick and juicy as those of *A. vera*.

4. OTHER FACTORS

Other factors to be considered include drought resistance, speed of growth, yield per plant, and disease resistance. These are grouped together as "other factors" because nothing is known about these aspects of Kenyan species.

No plant will grow without water, but as perennial plants capable of surviving a dry season aloes could be ideal for Kenya's semi-arid areas. Whether or not the rainfall in such areas is sufficient for plants to grow to marketable size in reasonable time without additional irrigation needs to be investigated. In the U.S.A. plants grown from suckers of *A. vera* are ready for harvesting after about three years, and so a plantation needs to have at least three areas with plants of different ages to ensure a sustained annual yield. One major producer in the U.S.A. claims that no herbicides or pesticides are used on plantations, and so presumably there are no major problems there with weeds, pests and diseases.

CONCLUSION

We have seen that on the basis of growth habit only five Kenyan species are suitable for use in plantations, and of these only three might possibly produce leaves of an acceptable size. The biochemistry and agronomy of all three species have yet to be investigated. These three species are not among the widespread roadside aloes seen in many parts of Kenya, but are of relatively limited distribution. Collecting these plants in the quantities required for the necessary investigations would harm the wild populations and would be most undesirable, from the point of view of conservation. My conclusion from this survey of the Kenyan aloes is that any entrepeneurs contemplating growing aloes for commercial purposes would be best advised to import samples of *Aloe vera* and carry out field trials to determine whether or not this species would give acceptable returns from plantations in Kenya.

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L.E. Newton, Botany Department, Kenyatta University, Box 43344, Nairobi.

SNAKES IN TRANSMARA

During the three years when our field station near Lolgorien, in Transmara, came into being and buildings were constructed, quite a number of snakes were seen on the compound. The area is hilly, mainly of open bush, with a densely overgrown ravine and is at an altitude of about 1750 m.

The most numerous snakes found (and killed) at ground level, were Burrowing Vipers* usually of small size. Three Puff Adders were killed during this period (50, 40 and 75 cm long), one of them in somebody's house. The capture of a Gaboon Viper, length 38 cm, near the top of our hill, was exciting but the question remains: where is the mother?

Boomslang* are very common, a number having been seen and at least seven killed, their colouration varies. I once found a Baglafecht (Reichenow's) weaver nestling in one snake's stomach and another time a sunbird nestling had been eaten. On 24 October 1985 a large pregnant female (140 cm long) was killed and on cutting it open, 14 white eggs and one 'dead' brown one were counted.

One Garter Snake (45 cm length) came too close to the house and was killed. A beautiful little snake (135 cm) with rhombic pattern was identified as an Egg Eater*. A Brown Egg Eater (86 cm long) lost it's life on the way to the chicken house.

One night one of my colleagues noticed that he was sharing his bed with a House Snake* (50 cm long) so it too had to die. A very dramatic catch and subsequent kill was that of a Green Forest Mamba* (140 cm long) which was spotted in a tree. I heard later from the Curator of the Snake Park, Nairobi, that this was the first sighting of this species east of the Nandi hills.

Two Jameson's Treesnakes* (185 and 190 cm long) were killed and two other big ones only seen. Another snake (120 cm long) which we suspected to be a Black Mamba, turned out to be an Olive-bellied Grass Snake*.

A 40 cm long Snake Lizard was found dead on the road, without visible injuries. And finally: my cat brought in a big, pretty lizard (40 cm long) which seemed unharmed, so I saved its life. From comparing it with illustrations in Norman Hedge's *Reptiles and Amphibians of East Africa* I think it was an Erithrian Greater Plated Lizard. Nobody had seen one like this before but photographs will help with proper identification later.

Since originally writing this note in November 1985, there has been a further record of a Gaboon Viper (62 cm long). The adult snake has still not yet been found. The Snake Park are anxious to obtain a live specimen but unhappily do not have funds to travel down here, I was told.

In April 1986 a Burrowing Skink (36 cm) with 9 foetuses of 9 - 12 cm long was found. On 4 November 1986 a Burrowing Viper was killed, she had swallowed a striped skink weighing 25 g, her own weight was 23.5 g and she was 'pregnant' with five eggs. To console snake lovers: a number of snakes were just seen and our compound is surrounded by a vast area of unspoilt bush.

Annemarie Lohding, Box 93, Kilgoris, Kenya. *= snakes identified by the Museum Herpetology section.

CURRENT CONSERVATION CONCERNS ABOUT KENYA'S PRIMATES

In July 1986, the International Primatological Society (IPS) held its biannual meeting in Gottingen, Germany. Attending the meeting were many primate conservationists who represented African, Asian and South American conservation interests. Dr John Oates, who is IPS Vice President for conservation and who has studied the black and white colobus of Kenya and Uganda, presided over the session on African primate conservation. In his introduction, Dr Oates stated that throughout Africa the survival of many primates is seriously threatened by hunting and habitat destruction. He made four recommendations for action to overcome these threats: (1) Campaigns to increase public awareness of the importance of conservation, (2) better enforcement of existing laws protecting wildlife and conservation areas, (3) the collection of distributional and ecological data on primate populations, and (4) the establishment of new conservation areas, especially in the rain-forest zone.

At the meeting, copies of the newly released *Action Plan for African Primate Conservation for 1986-1990* (APAPC) produced by the Species Survival Commission of the International Union for the Conservation of Nature and Natural Resources were distributed. Kenya is listed in Appendix 1 as being an African country which is home to 10 or more primate species (Kenya has 17 according to the nomenclature of the APAPC). The primate species which are found in Kenya are the potto *Perodicticus potto*, four species of the nocturnal bushbabies, *Galago senegalensis, G. zanzibaricus, G. crasicaudatus* and *G. garnetti*, the Tana River mangabey *Cercocebus galeritus*, the olive and yellow baboons *Papio anubis* and *P.cynocephalus*, the De Brazza monkey *Cercopithecus neglectus*, the Sykes monkey *C. albogularis*, the blue monkey *C. mitis*, the redtail *C. ascanius*, the vervet *C. aethiops*, the patas monkey *Erythrocebus patas*, the red colobus *Procolobus (badius) rufomitratus*, and two species of black and white colobus *Colobus quereza* and *C. angolensis*.

Although none of the listed primates are species which are endemic to Kenya, two are endemic subspecies; *Cercocebus galeritus galeritus* and *Procolobus badius rufomitratus*. A recent survey of these two species discovered that both had suffered population declines during the past ten years despite the fact that both are found in the protected Tana River Primate Reserve. The reasons for these declines are not understood. The situation at the Tana River Primate Reserve is viewed as sufficiently serious to warrant one of the highest conservation priority ratings in the APAPC. Fortunately, a long term study initiated by the National Museums of Kenya and the Wildlife Conservation Management Department has been started at the site and results should yield insights and solutions to the problem.

Another conservation concern is the current status of the black and white colobus *C. angolensis* inhabiting the southern coast of Kenya. Rapid tourist development along the coast has decimated much of the indigenous forests which the monkeys depend on for survival. The APAPC outlines a plan to survey some of these areas, especially the forests of Boni and Arabuko-Sokoki, and develop management suggestions. *C. quereza* are probably faring better than *C. angolensis*, but have undoubtedly undergone a population decline after years of being hunted and also as their available habitat declines. A preliminary investigation of this is currently being researched by questionnaires being distributed through *SWARA* magazine.

Finally, there are concerns over the status of Kenya's De Brazza monkeys. A recent survey estimated that there are only 200 of these animals left in the country! The remaining monkeys are mostly scattered throughout western Kenya in isolated forest patches eliminating the possibility of intergroup breeding. The only protected area where De Brazza monkeys are currently found is the

Saiwa Swamps National Park. Plans are being formulated by the Institute of Primate Research to introduce De Brazza monkeys into new areas if suitable sites can be located. In the Kakamega Forest there are encouraging reports of recent sightings of a relatively large group of De Brazza monkeys. These reports will be investigated.

The conservation status of Kenya's other primates is unknown but certainly the adaptable baboon and vervet are flourishing even where their habitat has been greatly altered. Sykes monkeys, too, seem to thrive when there are some trees and water available. To my knowledge, no one has studied the conservation status of the bushbabies, galago, redtails or patas monkeys in Kenya.

Erna Tarara, Institute of Primate Research, National Museums of Kenya.

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WOODPECKERS IN NAIROBI

The Brown-backed Woodpecker *Picoides obsoletus* is considered an uncommon species (see Williams' *Field Guide to the Birds of East Africa* and Britton *Birds of East Africa, their habitat, status and distribution*), but it is interesting to note that in Nairobi, at least, it is the second most commonly recorded Woodpecker. This conclusion is drawn from the records kept of the 'Wednesday morning bird walks' shown below and could therefore be distorted by the frequency of visits to its habitat.

SPECIES	NUMBER OF SIGHTINGS		
	1976-81	1982-85	Total
Nubian Woodpecker *Campethera nubica*	5	3	8
Fine-banded Woodpecker *C. tullbergi*	-	1	1
Cardinal Woodpecker *Dendropicos fuscescens*	21	10	31
Grey Woodpecker *Mesopicos goertae*	22	19	41
Brown-backed Woodpecker *Picoides obsoletus*	11	17	38
Bearded Woodpecker *Thripias namaquus*	2	-	2

Pat Wootton, Box 46143, Nairobi.

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LARGE FLOCK OF JACANAS AT LAKE BARINGO

Cruising along the shore line of Lake Baringo just north of Lake Baringo Club in the early evening (about 17.00 h) on October 15, 1986, our boatman spotted Jacanas flying into the reeds.

We followed and suddenly came across a large number - at least 35 - of the birds in a close group on a patch of beaten down reeds. More birds were flying in all the time. There did not appear to be any particular reason for the congregation - no courtship or other displays - and the birds just stood more or less in the same place.

We were unable to stay to see if anything happened later on, but the boatman could not recall ever seeing or hearing about such a large flock together. we have photographs of the flock if anyone is interested.

Y.R. Williams, c/o EANHS, Box 44486, Nairobi

GREEN-BACKED HERON 'BAIT FISHING' IN NAIROBI NATIONAL PARK

This observation was made on 20 December, 1986 between 08.30 and 09.00 h in misty conditions at a distance of about 2 to 3 metres.

The Green-backed Heron *Butorides striatus* was observed on a concrete causeway across a stream where the water came to the level of the causeway and a little over it, forming pools on the causeway. The heron was first observed to walk across the causeway to the edge and lean over the water. It appeared to catch a large flying insect, probably a bee, which was floating in the water. In fact, we thought it was catching flies instead of fish! It was then seen to spit out the insect inot the water. The insect floated back towards the edge of the causeway where the heron was crouching in typical pose with outstretched neck. The heron recaught the insect and placed it back in the water. This happened about six times.

The heron then caught a small fish, it was obviously using the insect to act as a bait to attract fish. It caught four fish in quick succession - about two minutes. Each time the insect was observed to be back in the water as the bird was swallowing the fish. In one case the heron was actually seen to catch the insect with the fish and then spit out the insect into the water before swallowing the fish. Each time the insect was moved to a slightly different position where there was presumably a shoal of fish near the edge of the causeway.

After catching these four fish the heron tried for about a further ten minutes moving the insect about every thirty seconds to one minute. It had no success. The heron then moved the insect to a small puddle on the causeway, and immediately caught a small fish there. It then placed the insect in the water about 70 cm from the original position and tried here for about ten minutes, moving the insect repeatedly after having caught another fish almost at once in the new position. It then moved back to its original position and almost immediately caught another fish.

The heron was then disturbed by two cars passing and flew up into an overhanging low tree about one metre above the water. Here it appeared to drop the insect into the water, as it was observed to stretch its neck down towards the water and the insect was then seen to floating upon the water. However, the insect was eaten by a fish, perhaps a larger variety as it was further out from the edge of the causeway. The heron then gave up and started preening.

We would be very interested to hear whether this behaviour has been noted in Kenya before.

C.D. Foxall & D. Drury, Kenyatta University, Dept. of Chemistry, Box 43844,
Nairobi.

Anyone who has noted this behaviour before is requested to submit their observations to the *Bulletin* please!

Editor.

GREAT SPOTTED CUCKOO IN NAIROBI NATIONAL PARK

On January 15 my husband and I saw two Great Spotted Cuckoos *Clamator glandarius* at the Hippo Pools in Nairobi National Park.

One bird flew into a thorn tree beside the track closely followed by the second. They stayed in the tree for several minutes and we were able to have very good views of them before they flew off, they were unmistakable.

There appear to be few records of sightings of these birds from Nairobi. One was recorded in April (East African Bird Report 1983. (*Scopus* Vol.7 (5) p.114). This would presumably have been during the rains and it is interesting to note that our record was similarly associated with recent heavy rain when the Park was green and lush.

This was one of the highlights of our annual visit to Kenya and was most exciting.

Penelope Chitty, C/o Mrs R.B. Sheppard, Box 24630, Karen, Nairobi.

JOURNAL OF THE EAST AFRICA NATURAL HISTORY SOCIETY AND NATIONAL MUSEUM

The following three Journal parts have been published and are now available to interested members:

Vol.75,No.182	LITTORAL HERMIT CRABS (Decapoda: Anomura) FROM PORT MOMBASA By P.J. Reay.
No.184	ECTOZOOCHORY BY HARES (*Lepus crawshayi*) IN QUEEN ELIZABETH NATIONAL PARK, UGANDA. By Asaph A. Ogen-Odoi & T.G. Dilworth.
No.185	VEGETATIVE KEY TO THE ALPINE VASCULAR PLANTS OF MOUNT KENYA. By Truman P. Young & Mary M. Peacock.
No.188	THE DISTRIBUTION AND ECONOMIC IMPORTANCE OF THE MANGROVE FORESTS OF KENYA. By J.O. Kokwaro.

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JOURNAL

The Society publishes The Journal of the East African Natural History Society and National Museum. Each issue consists of one paper, however, sometimes two or more short papers may be combined to form one number. The aim of this method of presentation is to ensure prompt publication of scientific information; a title page is issued at the end of each year so that the year's papers may be bound together. Contributions, which should be typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five reprints of their article free, provided that these are ordered at the time the proofs are returned.

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This is a duplicated magazine issued six times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (EANHS Bulletin), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

SCOPUS

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CHAIRMAN'S REPORT FOR 1986 - JOHN KOKWARO

It is once again my great pleasure to welcome all of you to our 77th Annual General Meeting and to report on the achievements and failures of 1986. The year started in a rather hectic manner with a few problems, particularly in the secretariat. The former Hon. Secretary who had been elected at the last A.G.M. resigned her post in May, and we had a desperate search for a successor. It was indeed very frustrating for the Executive Committee to function without a Secretary, who as you all know is responsible for the overall administration of the Society. There were also very few regular volunteer helpers during the early part of the year. But the situation changed dramatically when Mrs Martina Muga joined the Society in May as the Acting Hon. Secretary. Mrs Muga spent the first three months in the office just clearing up the mess which had been left by the outgoing incumbent. She joined forces with Mrs Daphne Backhurst and worked regularly in the Office from Monday to Friday until everything was back to normal. Indeed, any success the Society has achieved in 1986 is largely due to the efforts of these two ladies.

The Chairman reported on specific items as follows:

FUNCTIONS There is no doubt that the most popular and regularly well-attended activity was the weekly Wednesday morning bird walks led by none other than our Vice Chairman, Mrs Fleur Ng'weno. The second Sunday of the month morning "pot-luck" excursions continued, and were better attended. Our sincere thanks to Mrs Ng'weno for her dedicated efforts in organising these functions. Under the able leadership of our Functions Organiser, Mrs Dorrie Brass, the monthly evening lectures picked up very well later in the year. There were also several well attended camping trips, our thanks to Mrs Brass for her efforts in organising these activities throughout the year.

PUBLICATIONS The following five parts of the 1985 Journal were published:

No.182. Reay, P.J. Littoral Hermit Crabs (*Decapoda:Anomura*) from Port Mombasa.

No.183. Agnew, A. Cyclic sequences of vegetation in the plant communities of the Aberdare Mountains, Kenya.

No.184. Ogen-Odoi, A & Dilworth, T.G. Ectozoochory by hares in Queen Elizabeth National Park, Uganda.

No.185. Young, T. & Peacock, M. Vegetative Key to the Alpine vascular lants of Mt. Kenya.

No.188 Kokwaro, J.O. The distribution and economic importance of the Mangrove Forests of Kenya.

I would like to thank the Joint Editorial Sub-Committee, Drs. J.J. Hebrard and H. Beentje for their active work.

The Bulletin under the editorship of Mrs Backhurst continued to appear quarterly as resolved at the A.G.M. of 1984.

The Newsletter continued to appear monthly and is a useful source of quick information on Society matters for local members.

Scopus and the Annual Bird Report were published regularly by the ornithological Sub-Committee.

The first annual donation of KSh.20,000 towards the costs of publication of the journal was presented to the Society by the National Museums of Kenya last July. Our grateful thanks to Mr R.E. Leakey.

LIBRARY The Library functioned smoothly throughout the year, with ample reading space, more new reading material and improved management. The Executive Committee requested the Librarian to attend its monthly meetings as an Ex-Officio member and to assist in making recommendations on the spot.

I would like to thank the following people who have assisted me in running the Society's affairs throughout 1986: Mrs Katie Smalley, Mrs Mavis Watts, Mrs Judith Rudnai, Mrs Erna Tarara, Mrs Ann Visagie, Mrs Yolande Williams , Mrs Inga Ayres, Mrs Dorrie Brass, Mrs Daphne Backhurst, Mrs Fleur Ng'weno and last but by no means least, Dr S.G. Njugana, our able Treasurer.

Our relations with the National Museums of Kenya were excellent, and on behalf of the Society I would like to thank the Museum Director, Mr Richard Leakey for allowing us to continue using the Lecture Hall and other facilities.

May I conclude my remarks by thanking all Members of the Society, both local and overseas for their continued support. Please attend the Society functions and make suggestions to our Functions Organiser should you have any ideas as to lectures or trips that could be icluded in our programme.

Thank you all for the co-operation and support you have given me.

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A CHECK LIST OF KENYAN ALOES

As the Liliaceae fascicle of the *Flora of Tropical East Africa* has not yet appeared, the main reference work for the genus *Aloe* in Kenya is the monograph by Reynolds (1966). Valuable as this work is, it is now out of date in some respects. The paper by Gillett (1967) is a useful short-cut for the identification of East African aloes, but that paper is based entirely on the contents of Reynolds' book. For the preparation of the article on aloes that appeared in the last issue of the *Bulletin* it was necessary to compile a list of all *Aloe* species now known to occur in Kenya, and this list is presented below.

Reynolds included 26 species with records from Kenya, plus one imperfectly known species and possible records of a species known from Ethiopia. Since 1966 two species listed by Reynolds have been sunk into synonymy, four species recorded from outside Kenya have been found in Kenya (including confirmation of the one already known from Ethiopia), and a further nine new species have been described. This gives a total of 37 species currently known in Kenya. All are listed below, with literature references for species described since 1966. Names that have been changed since 1966 are included with an indication of their new status. Names of species that are included in Reynolds' book are followed by the page number, indicated by the letter R. Distribution of each species within Kenya is indicated by the letter K, using the seven geographical divisions (Provinces) adopted by the Editors of the *Flora of Tropical East Africa*.

One further up-dating of a name in Reynolds' book is worth mentioning here as interest in the species concerned led to my article in the last *Bulletin*, Vol.17(1), even though the species does not occur in Kenya. Reynolds stated that the widely cultivated medicinal plant known as *Aloe vera* should be called *Aloe barbadensis* Miller, but it was later shown that the correct name is *Aloe vera* (Linnaeus) Burman f. (Newton, 1979).

A. *amudatensis* Reynolds (1956). R:76. K1,2.
A. *archeri* Lavranos, *Cactus and Succulent Journal (U.S.)* 49:74 (1977). K6.
A. *babatiensis* Christian & Verdoorn (1954). R:358. K4.
A. *ballyi* Reynolds (1953). R:325. K4,7.
A. *calidophila* Reynolds (1954). R:217. K1.
A. *cheranganiensis* Carter & Brandham, *Cactus and Succulent Journal of Great Britain* 41:4 (1979). K2.
A. *chrysostachys* Lavranos & Newton, *Cactus and Succulent Journal (U.S.)* 48:278 (1976). K4.
A. *classenii* Reynolds (1965). R:255. K7.
A. *confusa* Engler (1895). R:165. K7.
A. *dawei* Berger (1906). R:368. K4,5,6.
A. *deserti* Berger (1905). R:337. K3,4,7.
A. *dumetorum* Mathew & Brandham, *Kew Bulletin* 32:19 (1977). K1.
A. *elgonica* Bullock (1932). R:359. K3.
A. *erensii* Christian (1940). R:59. K2.
A. *fibrosa* Lavranos & Newton, *Cactus and Succulent Journal (U.S.)* 48:273 (1976). K4.
A. *graminicola* Reynolds (1953). R:78. K3,4,7.
A. *juvenna* Brandham & Carter, *Cactus and Succulent Journal of Great Britain* 41:29 (1979). K6.
[A. *kedongensis* Reynolds (1953) R:374. = A. *nyeriensis* subsp. *kedongensis*.]
A. *kilifiensis* Christian (1942). R:80. K7.
A. *lateritia* Engler (1895). R:95. K3,4,5,6,7.
A. *lateritia* Engler var. *kitaliensis* (Reynolds) Reynolds (1966). K3.
A. *lensayuensis* Lavranos & Newton, *Cactus and Succulent Journal (U.S.)* 48:276 (1976). K1.

A. *macrosiphon* Baker (1898). R:176. K6.
A. *marsabitensis* Verdoorn & Christian (1940). R:303. K1
A. *meruana* Lavranos, *Cactus and Succulent Journal (U.S.)* 52:242 (1980). K4.
A. *morijensis* Carter & Brandham, *Cactus and Succulent Journal of Great Britain* 41:3 (1979). K6.
A. *myriacantha* (Hamworth) Roemer & Schultes (1829). R:6. K3,4,6.
[A. *ngobitensis* Reynolds (1953) R:377. = *A. nyeriensis* subsp. *nyeriensis*]
A *nyeriensis* Christian (1952) subsp. *nyeriensis* [incl. *A. ngobitensis* - see *Botanical Journal of the Linnean Society* 80:313 (1980)] R:380. K3,4.
A. *nyeriensis* Christian subsp. *kedongensis* (Reynolds) Carter, *Botanical Journal of the Linnean Society* 80:313 (1980). R:374. K2,3,4,6.
A. *otallensis* Baker var. *elongata* Berger (1908). R:158. K1.
A. *pirottae* Berger (1905). R:66. K1,4,7.
A. *rabaiensis* Rendle (1895). R:366. K4,6,7.
A. *rivae* Baker (1898). R:114. K1.
A. *ruspoliana* Baker (1898). R:253. K1,6,7.
A. *secundiflora* Engler (1895). R:230. K1,3,4,6,7.
A. *trichosantha* Berger (1905). R:131. K1.
A. *turkanensis* Christian (1942). R:224. K1,2.
A. *tweediae* Christian (1942). R:269. K1.
A. *ukambensis* Reynolds (1956). R:264. K4.
[A. *vituensis* Baker (1898) - imperfectly known species. R:529.]
A. *volkensii* Engler (1895). R:327. K4,5,6.

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Newton, L.E. 1979. In defence of the name *Aloe vera*. *Cactus and Succulent Journal of Great Britain* 41: 29-30.
Reynolds, G.W. 1966. *The Aloes of Tropical Africa and Madagascar*. Trustees, The Aloes Book Fund, Mbabane.

L.E. Newton, Botany Department, Kenyatta University, Box 43844, Nairobi.

CORRECTION: In the previous issue of the *Bulletin* Vol.17 (1) "On the suitability of Kenyan Aloes for commercial cultivation" Page 6 line 3 should read - (a) the leaves contain a complex mixture of many different -

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BUTTERFLY MIGRATION

On 13 November 1985, a migration of the Hesperid (Lepidoptera: Hesperidae) *Coeliades anchises* Gersd. was seen, where large numbers of this "skipper" butterfly were crossing the main Mombasa road near Kibwezi in a predominantly N.E. to S.W. direction. Some of them were flying in other directions, but the majority were flying southwards, into the wind. This migration was seen initially near Makindu, and continued to just past Kibwezi, a distance of approximately 20 km.

Later, on 19 November, the same species was seen migrating between the higher ground west of the Sala gate in Tsavo East National Park, and the main gate at Voi. They were flying in the same direction into a wind of about 2 m/sec. These butterflies were flying at heights from just above the ground up to about 7 metres. I tried to estimate numbers passing between my car and 20 m ahead of me. At 16.45 h approximately 100 crossed this space in 110 sec., this is 3 272 per hour per 20 m swath. They were still flying at 18.15 h, although rather fewer. Someone may be tempted to speculate on the numbers involved, assuming they were all part of one migration and the distance through the area observed was about 60 km and that there are at least 10 flying hours available per day.

On 6 January 1987, on the Dida to Roka road on the southern edge of the Sokoke Forest, what could only be described as a swarm of the Hesperid butterfly *Andronymus* (probably) *neander* Evans, was seen crossing the road at between 1 and 3 m high and flying from S.S.E. to N.N.W. at 14.50 h. There were so many butterflies flying so fast that it was impossible to count them. At the onset of a rain shower, which lasted only a few minutes, all visible flight stopped; beginning again immediately the rain stopped. Food plants of this latter species varied, and no doubt both migrations were to pastures new.

The most commonly seen butterfly migrations in Kenya are those made by certain members of the "whites" (Lepidoptera: Pieridae), and it was therefore worth noting these two "skipper" trips!

C.F. Dewhurst, Box 30023, Nairobi.

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THE QUELEA MASSACRE AT WESUNGU, TSAVO NATIONAL PARK (EAST)

The Red-billed Quelea *Quelea quelea* is an unprotected bird under the Wildlife Act, because it is regarded as a pest.

During the short rainy season, October to December, the Red-billed Queleas breed in large numbers in some sections of the Park. When the young mature sometime in late January/early February, the majority of the birds leave for other regions and possibly for agricultural lands upcountry.

On Sunday 25 January, 1987, we were on our way through the Park to Ithumba, the headquarters of the northern area of the Park. At around eleven o'clock, we passed Lugard's Falls and crossed the Yatta Plateau, heading north. After about 20 k or so from the falls, we saw numerous birds flying about in the air. Vultures? We thought there was a dead animal somewhere, killed either by other animals or poachers. The Park was very green, especially this northern area, which is still closed to the general public. As we drove closer the picture changed. They were not vultures but approximately some 500 to 800 Marabou Storks and an even higher number of Steppe Eagles (estimated to be between 800 - 1200). It was strange, we coud not see the reason why some of the birds were in the air, some on the ground and others amongst the trees and shrubs.

We stopped, alighted from the vehicle and walked towards the *Acacia* shrubs, which we found to be housing between 1000 - 1500 or more of Quelea nests. The Quelea parents were not anywhere near the nests, but the storks and eagles were. The latter flew away as we approached. The bird 'pirates' were picking the semi-mature, helpless young from the nests, and swallowing them whole (storks) or tearing them to pieces (eagles). Most of the nests within reach had been torn or ripped open and their contents gone. As we watched the scene in dismay, we saw the small Quelea parents come one by one to their nests and in a few minutes there were very many in front of us noisily jumping here and there through the *Acacia* thorn bushes into their nests. The Queleas definitely regarded us as friends who had helped them against their enemies!

Though the Queleas are still a big menace in our agricultural lands, we wished there was anything we could do to help them.

Through 7 X 35 binoculars, we saw that at right angles to the road for distances of about 100 m (or more as far as we could see), there were many more Marabous and Eagles busy plundering the nests. The action of the huge powerful beaks of the Storks and the strongly curved and sharp beaks of the Eagles resulted in a horrible massacre to the many nests of the Queleas. Under the *Acacia* shrubs were several dead nestlings (some of the Eagles had picked those).

We drove for a stretch of nearly 1.5 k and along most of this distance were the two species of birds, most of them resting. At one time as we were driving, a Marabou stork ran fast ahead of us on the road attempting to fly off, then, perhaps unable to take off, stopped by the road as we slowed. The bird then started to vomit, immediately after which it flew away. We got out of the vehicle and saw that the vomit contained nothing but dead, intact, nestlings of the Quelea. The young had been swallowed whole and had perhaps died of suffocation. We counted them all - up to 22! We guessed that it could swallow as many as between 50 - 100 young throughout the day.

Whether this seemingly natural control of the Quelea population is a habit every year in this part of the Park, I cannot tell, but it undoubtedly is an effective way of killing the yet immature birds at a critical stage of the breeding cycle. The action of the two species of bird predators still leaves a question in our minds: was it just another opportunity or is it a habit the predators have become accustomed to every season the Queleas breed? Well, this can only be answered by further investigation.

Oscar Wambuguh, Research Station, Tsavo East National Park, Box 14, Voi.

Mr Wambuguh provides an excellent description of the seemingly heavy predation of quelea by Marabous and eagles (mostly migrant Steppe Eagles *Aquila nipalensis* and some local Tawny Eagles *A. rapax*) in Tsavo East. It was in roughly the same area that Simon Trevor filmed predation for his quelea T.V. film 'Birds of a Feather' and it seems that it regularly occurs in the Park. However, the point which the film brought out and we *think* is so (but no one has figures) is that the predation does *not* have a completely devastating effect on the quelea nestling production except perhaps on very small colonies (1 or 2 hectares). The eagles and marabous normally only start to raid the colony when the quelea chicks are nearly ready to leave the nest (and are big enough to be worth eating) at about 9 days old (quelea chicks stay in the nest only 11 days which is exceptionally few for a bird of this size, and get out of the nest before they can fly at all). They can only catch them up to about 15 days old by which age the quelea can fly out of reach. In other words, predation is limited to only about one week in the six week breeding cycle. In studies carried out in Mali by Thiolley, the estimated daily intake by eagles and marabous was 30-40 chicks, so Mr Wambuguh's bird was pretty full and could probably only have eaten half as much again when digestion had made some more room. 1500 eagles and storks could theoretically eat 60 000 chicks in one day which is about the production of one hectare of quelea colony. Colonies of 40 ha are not uncommon in Tsavo East, so it can be seen that plenty of quelea will survive from big colonies.

An interesting point is to wonder why such high concentrations of predators are typical of Tsavo East. Is it because Tsavo is a relatively undisturbed habitat? Were such concentrations typical of all savanna/bush areas of East Africa before the advent of agricultural man? If so, there must have been a strong selection pressure on quelea to nest in big colonies in patches of dense acacia where the predators could not easily get at them.

Dr C.C.H. Elliott, Project Manager, FAO/UNDP Crop Protection Project,
Box 30470, Nairobi.

P.S. Incidentally Quelea are again breeding in Tsavo East and there is a very dense colony (with fresh eggs on 22 May 1987) just across the river and visible from the Lugards border post.

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EUROPEAN BLACK STORKS

I think the following report of a sighting of European Black Storks in Uganda may be of interest.

On 25 February 1987, I undertook a day safari from Kampala to Masindi and at around noon was just over halfway, in the vicinity of Nabiswera where the countryside is still well covered with forest although now under attack from charcoal burners as well as settlement. I spotted a column of European Black Storks that extended from ground level, where a number of birds were walking around or perched in trees, to a height of about 300 m; my travelling companion and I came to the conclusion that there were about 1500 birds riding the thermal. At the same time we discovered parties of birds of up to 50 individuals coming in from all directions and joining the group. When we left the area to continue on to Masindi we reckoned the gathering had increased to some 2000 birds. Even after travelling 30 km further on to Kibogga we still spotted birds grouping here and there and setting off in the general direction of Nabiswera.

The birds were at first assumed to be gathering for the return migration to Europe but I did notice other birds on the ground in the bush, notably kites and two eagles not positively identified but believed to be immature Steppe Buzzards. They appeared to be anticipating a feast of perhaps locusts or army worm and maybe these were the attraction for the storks also.

P.G. Volrath, Box 30061, Nairobi.

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'HILLTOPPING'

John Goodman's article in the *EANHS Bulletin* (March 1986: p.5) on the large green grasshoppers *Homorocophus nitidulus*, known in Uganda as NSENENE, came into a discussion recently in the Department of Zoology at Makerere. Somebody mentioned that in the hilly south-west of the country (Kabale, Rakai, Bushenyi, Masaka and Mbarara Districts, parts of the old Kigezi, Masaka and Ankole Districts), swarms of Nsenene are well known to favour hilltops. These swarms, which are making flights, are attracted in more populous areas to fly around street lights at night as reported by John Goodman.

During the Nsenene's swarming periods of April - June and October - December, individuals can be observed ovipositing. It is most probable that after five months the individuals hatching from these eggs have grown to adults and are themselves ready to swarm. Between the swarming periods, these grasshoppers are small, lean and non-swarming and occur in two colours, green and brown. Swarming occurs during the two rainy seasons when there is plenty of lush, young, green grass. The initial swarming appears to be highly synchronised, people wake up to find Nsenene over the whole area. The swarms seem to prefer the hills and these are covered by species of *Loudetia, Brachiaria* and other savanna grasses. It is not known whether the Nsenene swarms prefer the hills because valleys are cultivated with non-graminae crops or the grassy hilltops are ideal for their mating purposes. The swarming behaviour is nocturnal and thus is the coolest part of the day.

It is most likely that Nsenene occur in two phases: one solitary and non-swarming and the other, swarming and highly polymorphic. The former is common except at the time of swarming. It changes into the fatty reproductive phase and swarms prior to breeding at the time of optimal conditions. Thus swarms may be aggregations of solitary individuals. They pick up more and more individuals during their nocturnal movements within the same general area. It would then appear that with absence of electric lights in rural Uganda, hilltops become convenient catchment points during these nuptial swarms. The fat of the Nsenene is therefore essential to enable them to undertake the flight during swarming and offset the reduced feeding during the vigil. It is also the fat which makes them highly valued as food by everybody who has the chance to catch some.

A tendency to mate on hilltops is well-known for other insects in other parts of the world, particularly amongst beetles, solitary wasps, butterflies and moths. Apparently the males take up territories at the tops of hills, especially where these are isolated and conspicuous. Their territories may contain little or no food, and no resident females. But the females visit them, and find prospective mates waiting for them. Characteristically the most dominant males hold territories at the highest point on the hill. In flat country with no hills, isolated trees sometimes act as similar attractions.

Nsenene, which habitually form large swarms, are perhaps different but their prediliction for hilltops may have a similar purpose in providing a 'meeting place'

We should be interested to hear of other examples of this sort of behaviour in East Africa.

J. Baranga & D. Pomeroy, Dept. of Zoology, Makerere University, Box 7062.
Kampala.

WILD DOG SIGHTING NEAR NAIROBI

On 15 April, 1987 at 07.30 h three Wild Dogs were sighted about 1 km from my house. The area is grassland with few scattered trees about 3 km East of Jomo Kenyatta Airport.

The dogs had just killed a baby kongoni and were in the process of eating it. They were three females, one of them sub-adult, all in excellent condition. I watched them feeding for about 45 minutes when only a few small bones were left. The dogs then started moving away in a southerly direction.

This is the first sighting of wild dogs in this area during the ten years that I have been living here.

Judith A. Rudnai, Box 56519, Nairobi

A NINE YEAR RECORD OF SNAKE SIGHTINGS IN THE EMBAKASI AREA

The following is a record of snakes seen in and around my garden at Katani Estate, Machakos District, between 9 March 1978 and 9 March 1987. The area is a sisal estate but that part of it where the house is situated has more or less reverted to bush with scattered trees *Acacia drepanolobium, A.xanthophloea, Balanites aegyptiaca* and some exotics such as Gum trees *Eucalyptus* sp. and Pepper trees *Schinus molle*.

The soil is mostly black cotton with impeded drainage. Altitude is about 1 600 m.

Twelve species of snakes were identified as listed below in order of frequency of sightings.

Species	No. of sightings
Night Adder *Causus rhombeatus*	27
Puff Adder *Bitis arietans*	13
Hissing Sandsnake *Psammophis sibilans*	9
Cobra *Naja haje*	8
Grass snake *Philothamnus* sp.	5
Striped grass snake *Psammophis* sp.	4
House snake *Boaedon fuliginosus*	3
Blind snake *Typhlops bibronii*	2
Egg Eater *Dasypeltis scabra*	2
Cape Wolf snake *Lycophidion capense*	2
Centipede Eater *Aparallactus* sp.	2
Garter snake *Elapsoidea* sp.	1
Unidentified	2
Total	80

Sightings grouped by month in order of frequency

Month	No. of sightings	
January	13	
February	12	
December	9	
September	8	
November	7	
April, July, October	18	(6 each)
June	5	
May	4	
March	3	
August	1	
Total	80	

Shed skins were found during the months of February, March and December.

Concerning seasonality of sightings this record suggests that snakes are seen more often in dry months (December to February). On the other hand, months with low numbers of sightings include both wet and dry months (May, June, August).

It is often said that snakes are seen more often during wet months when their underground hiding places fill up with water. This record does not seem to support this view, although a statistical analysis - to prove the significance or otherwise of the monthly differences - is not meaningful due to low monthly numbers.

As for frequency of certain species, it is to be expected that the Puff Adder would be seen often as it frequents this type of habitat, rather dry bush country. Night Adders on the other hand often occur near human habitation as one of their main food scources are small night-active rodents such as mice and rats.

Of the cobras, the Egyptian Cobra is common in this area around Athi River and is the one that was seen.

During the last sighting (1 January 1987) of a 1.5 m long Hissing Sandsnake *Psammophis sibilans* the snake put on a display I had not seen before. When I came upon it, it was lying near the wall of the house and on seeing me it started to thrash about wildly, throwing its body into coils but not moving away from me. Its escape route was in no way blocked and this display delayed its escape. It eventually moved along the wall still thrashing about and disappeared around the corner of the house presumably underground.

Has anyone seen a similar display? and if so under what circumstances?

Judith Rudnai, Box 56519, Nairobi.

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CORRECTION: In the last issue of the *Bulletin* Vol.17 (1) "Snakes in Transmara"

Paragraph 4 - A beautiful little snake (35 cm) *not* 135 cm.

Paragraph 5 - a Green Forest (or Jameson's) Mamba (140 cm long) which was -

Paragraph 6 - Two Jackson's Treesnakes* *not* Jameson's

Paragraph 7 - the Erithrean Greater Plated Lizard was 46 cm long *not* 40 cm.

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STORKS AND ARMY WORM

During the afternoon of 19 February 1987, down in the Mara plains, I came across thousands upon thousands of storks literally 'dropping' from the sky to feed on army worm.

The most numerous species were Abdim's Storks, followed by European White Storks and Marabous. It was a fantastic spectacle.

I have never seen so many Marabou storks in one place before and it is interesting to speculate from how far they had come.

Annemarie Lohding, Box 93, Kilgoris, Kenya.

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CHANGES 1961 - 1987

I have just completed a magnificent 'bird' safari in Kenya; my first holiday since we left our home in 1961.

It may be of interest to note a few trends which may have been gradual and therefore not particularly noticeable to permanent folks.

FIRST: In the old days birds of prey and migrants at the appropriate season were always to be seen gracing the telephone poles and other vantage points bordering the road from Nairobi to Nakuru and beyond. In 1987 they were rarely seen. I wonder if the traffic noise, or more likely its pollution have driven them away?

SECONDLY: In our panoramic photographs of Nakuru, taken in the morning, the town is almost obliterated by an ominous grey cloud of polluted air.

Later we made the nostalgic train journey from Mombasa to Nairobi and looked forward to the well-remembered view of Nairobi from near Stony Athi and Athi. But in 1987 the grey cloud obliterating Nairobi was even denser than that over Nakuru.

THIRDLY: The spread of the goat (and cattle) population in the Kerio Valley and along the Magadi Road does not augur well for the future

FINALLY: And probably the most disastrous in the long term, is the disapprarance in many Highland areas of the indigenous trees and their replacement (where there is any) by eucalyptus species.

I was certainly disturbed by the damage these trends could make to our beloved Kenya, damage which could seriously affect the whole population in due course.

D.K. Bednall, Moonfleet, Higher Ansty, Dorchester, Dorset, England.

P.S. Cannot the goats be controlled somehow and does practically every bus and truck *have* to emit ghastly choking black fumes?

I hope *somebody* cares for this lovely land and its growing population!!

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CALEDONIAN WILDLIFE TRIP TO SOUTHERN TANZANIA

On 23 August 1986, twelve of us flew from London to Dar es Salaam, where we were met by Glyn and Debbie Lewis of Arusha, their drivers, camp staff and three brand-new Landrovers and together we made a two week trip to Selous Game Reserve, Ruaha National Park and Mikumi National Park.

At Dar we were fortunate to have the help of Neil Baker who was soon spurring us into action and by the next morning, when we left for the Selous, we had already seen a number of birds including Madagascar Squacco Heron, Madagascar Pratincole and scores of Palaearctic waders.

At the Selous, we stayed at the lovely Rufiji River Camp where Bohm's Bee-eater was resident amongst many other birds. Bushbabies came down to look for scraps after nightfall. One of the highlights of our stay here was the boat trip on the Rufiji - many mammals and birds were seen including

Darter, Madagascar Squacco Heron, Palm-nut Vulture, Giant Kingfisher and Dickinson's Kestrel.

On 26 August, we made our own camp on the shores of Lake Tagalala, also in the Selous. This was an excellent place to stay, with the lake area very good for birds; we saw Painted Snipe here. Crocodiles and Hippo were very common. We made short excursions into the surrounding areas but although we saw a good range of mammal species including lion, the wooded nature of the area and the shyness of the animals made for less of a spectacle than in the northern parks. Birds seen included Spotted Thicknee, Bohm's Spinetail and Levaillant's Barbet.

On 29 August we left the Selous and made our way to Morogoro, stopping for a couple of hours at Kimboza Forest in the eastern Ulugurus. Although we were not at Kimboza at the best time of day, we did see several species here that we did not see elsewhere on the trip including Narina's Trogon, Silvery-cheeked Hornbill, Crested Flycatcher and Dark-backed Weaver. We also saw Blue Monkey and Black and White Colobus (the latter with a tiny young).

After a night at Morogoro, we made our way to Ruaha stopping briefly at Ruaha River Gorge where we were rewarded with views of Ovampo Sparrowhawk. We also saw three Verreaux's Eagle en route to Ruaha.

We spent four nights at Ruaha River Camp and explored this beautiful park from there. The camp is built on a Kopje and offers marvellous views and the food and hospitality was of a high standard.

Although part of the Park had been recently burnt (by poachers), there was enough to keep everyone happy and we all thought that this was the best area that we had visited on this trip. We recorded some 125 species of birds at Ruaha including Ostrich, Goliath Heron, a superb adult White-backed Night Heron, numerous Saddle-billed Stork, Long-crested Eagle, both Chanting Goshawks, Gabar Goshawk, Dickinson's Kestrel, Three species of Bustard, Grey Kestrel, Common Pratincole, Skimmer, Verreaux's Eagle Owl, Pearl-spotted Owlet, Sulphur-breasted Bush Shrike, Golden-breasted Bunting and Cinnamon-breasted Rock Bunting. Mammals were numerous too highlights being Marsh Mongoose, lovely views of Leopard, Roan Antelope and numerous Greater Kudu.

At Ruaha, we made an excursion into the 'miombo' woodland to look for Sable Antelope and although we failed to find them, we did see Southern Reedbuck, Lichtenstein's Hartebeeste and several 'new' birds including the beautiful White-headed Black Chat.

After leaving Ruaha on 2 September, we spent a day at Mikumi where we saw the only Hunting Dog of the trip. Sadly, this was injured when first seen (three lionesses nearby may have had something to do with this). After ignoring the dog for about half an hour, one of the lionesses went over and killed it. Lichtenstein's Hartebeeste were more numerous here than at any other place we had been.

Everywhere we went we met with good hospitality and thankfully none of the problems that people have experienced in Tanzania in the past. We did not even have as much as a flat tyre in the fortnight. There were no food shortages, and everywhere we went we had loo-rolls and light bulbs!

For most of the time, we had the place to ourselves. I doubt if we saw more than ten other vehicles in the Parks during our stay.

In all, we recorded about 240 species of birds (full list, localities and numbers lodged with the EANHS) and 33 species of mammals.

Following our return to Dar es Salaam on 4 September, the clients left for the U.K. whilst I spent a further two weeks as guest of Liz Boswell and Neil Baker, grateful thanks to them for their hospitality. We went ringing in the Pugu Hills and amongst other birds, we caught Red-capped Robin Chat, Pale-breasted Illadopsis and East Coast Akalat. I also saw Crowned Eagle, Fiery-necked Nightjars and Broad-billed Roller at the Pugus.

Palaearctic waders were very numerous at Dar es Salaam by now (5 - 18 September) and amongst others, there were two Oystercatcher! Terns were numerous too and six species were seen including two Caspians. Other records included Black Heron, African Marsh Harrier, Crab Plover, some very early Carmine Bee-eaters (at a grass fire), Little Rush Warbler, Uluguru and Little Purple-banded Sunbirds and Zebra Waxbill.

Zul Bhatia, Ivy Cottage, Insh, Kingussie, Inverness-shire, Scotland, U.K.

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END OF AN ERA AT BUSHWHACKERS

As a friend of Mrs Joan Stanton, albeit only for the last ten or eleven years, I would not like her departure from Bushwhackers, to live in Nairobi, after 30 years there to go unnoticed.

We have enjoyed many visits to Bushwhackers, made all the more memorable by Jane's presence and her courage in remaining there in isolation after the death of her husband, Hugh, with whom she had shared so many adventures during their long and interesting life together.

I have always found Jane modest to the point of being casual when I have tried to draw her out into telling me some stories of her early life. However, I have been able to piece together some of these details from a collection of old journals which she has been selling in aid of one of her favourite animal charities.

From one of these I learned that Hugh Stanton came out to Kenya as a small boy in 1907 and by 1909 was collecting toads and frogs for Theodore Roosevelt on the Smithsonian Expedition. Later, he became a white hunter and, amongst other scientific trips, led those of Baron Louis Rothschild. He also served as one of the "gun men" employed in protecting the actors from wild animals during the filming of M.G.M's "Trader Horn". As so often happens, Hugh became weary of the trophy hunters and instead began trapping animals for the safari films which were gaining popularity and which did a lot to arouse the interest of tourists in the Kenya scene. With great foresight he captured and shipped to the San Diego Zoo some of the then diminishing species to assist in the captive breeding of animals in danger of becoming extinct. Jane assisted him in his work and later they set up a rustic camp, Bushwhackers, then deep in the unspoilt bush country by the Athi River, for those who wished to see Africa and its animal population much as it had been in the last century, but with the luxury of an outstanding meal of several courses at the end of a satisfying day.

Jane had come out to Africa in 1928 to work as a Secretary, quite a feat for a lone woman in those days. Here she met Hugh Stanton whom she married in 1930 and thus began an interesting, tough and adventurous life.

Kenholm Stott, once Curator of the San Diego Zoo, mentions in one of his articles on the "Hirola" (Hunter's Hartebeeste) that, of his 19 African jaunts, the two most outstanding were with the Stantons in their 1947 Chevrolet Saloon car. The first was in 1948 when Hugh and Jane took him on almost non-existent tracks in Kenya's N.F.D., through a wilderness of great beauty, to the game-filled grasslands of the Lorogi Plateau to the N.E. bank of the Tana River. Ken met the Stantons in 1948 and came to Bushwhackers for a month almost every year thereafter until 1974.

The second safari in 1957 was undertaken in the same once gleaming Chev., which by now had clocked up 100 000 miles, and this safari was not without its adventures. On this occasion Jane was unable to accompany them as she had to remain at Bushwhackers to look after the guests.

Bushwhackers in later years had, of necessity, to become a self-service camp but the beauty of the Athi River in its many moods remains, together with some remnant forest. Human pressures and poaching have wiped out the animals but the bird life, peace and the scenery make it still worth a weekend or a stop over point en route to the coast. Mr Mbindu, who now owns the site, is continuing to run the camp along the same lines for those who wish to get away from Nairobi and the normal tourist routes for a peaceful and inexpensive weekend.

Marjorie Watts, Box 30380, Nairobi.

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SOCIETY TRIP TO NDARA RANCH

A small but enthusiastic group of members spent a weekend in Tsavo Game Ranch Cottages (Ndara Ranch) 15 km south of Voi, from January 30 to February 1, 1987.

The hope was to see some of the spectacular dry country bird life for which the ranch is quickly becoming renowned, and we were not disappointed. Suffice it to say that Fleur Ng'weno saw three birds she had not seen before - the Steel-blue Whydah, the Barred Warbler and the Pangani Longclaw.

There was a constant parade of gaudy birds. Paradise Whydahs by the tree-full, Steel-blue Whydahs in the gardens of the cottages, Golden-breasted Starlings, Orange-bellied Parrots, a Pangani Longclaw in superb plumage and, on the final morning, three Straight-crested Helmet Shrikes.

Altogether, we saw or heard 72 different species of birds that we were able to identify; in addition, there were others that were either too high or too far away to be sure of. On a ninety minute early morning walk, we spotted 48 different species within 100 metres of the cottages.

A full list of the birds seen during the weekend is lodged in the Society Office and we are sending a list of all the birds spotted on various visits to the ranch to begin a permanent record. The manager told us that two ornithologists had listed 180 different species of birds around the ranch. He could not remember their names but should they happen to read this, the EANHS and, no doubt, the Museum's Department of Ornithology would like to have copies of their list.

Yolande Williams, Box 34043, Nairobi.

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This is a duplicated magazine issued six times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (EANHS Bulletin), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

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A publication of the East African Natural History Society, Box 44486, Nairobi, Kenya. Price 10 shillings.

EANHS BULLETIN Volume 17 (4) SEPTEMBER 1987

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THE HUNTING DOGS' DILEMMA

The African Hunting Dog *Lycaon pictus* has become rare throughout the continent. Today, it is a brave tour leader who, in the absence of a known denning pack, promises the sight of hunting dogs to his clients. Perhaps even more than the elusive leopard, a sight of this species has become a jewel in the crown of a wildlife safari in East Africa.

The round-eared, skewbald dogs have a hard life attaining any level of respectability. Until the more attractive facets of their remarkable cohesive, co-operative life style became public knowledge (through such films as Hugo van Lawick's delightful *Solo*) the dogs' image was simply a bad one. Year after year, pack after pack, hunting dogs were shot. In the eyes of many people (many park wardens included) they were considered unnecessary, wanton killers. Their habit of disembowelling their prey was seen as unsporting and their effect on the game as wholesale slaughter. For those who beaded and blasted the dogs, the issue was clear - they were straight forward destructive pests.

Although recent years have seen their public image improving, other factors such as disease, appear to be contributing to their continuing decline in numbers.

Disease is often cited as one of the main causes of the species' decline, but little is known of the prevalence of infections such as canine distemper, parvovirus and rabies in Hunting Dog populations. George Schaller saw dogs that were almost certainly suffering from canine distemper during the late sixties in the Serengeti; but by and large, the exact nature of the relationship between disease and mortality in the species remains unknown.

Since 1985, Clare FitzGibbon and I have re-established long term monitoring of the dogs in the Serengeti. Many people reading this article will be familiar with the ground-breaking scientific studies carried out by a number of researchers in the late sixties and in the seventies on the short grass plains of the Serengeti. Kuhme, Schaller, van Lawick and Goodall, Malcolm and the Frames all contributed to the process of unravelling the hunting dogs' complex social life. The park has been the central stage for the development of understanding, though outstanding work has since been carried out by Reich in the Kruger Park and Childes in Zambia.

Our work in the Serengeti arose in response to the dogs' obvious plight. In 1970 ninety five dogs roamed the short grass plains. In June 1987, as I write, only 22 remain, including the 11 puppies who were born in Mid-January. In March, four two-year-old females emigrated from their natal group, but have yet to find males and form a breeding pack. Recent reports confirm that there are dogs in the west of the park, beyond the area in which they have been studied previously.

Last year we watched another pack of thirteen dogs whose home range straddled the boundary of the Serengeti and the Ngorongoro Conservation area. Suddenly, they were killed off by an unknown pathogen during June. Remains of seven were found, as were the remains of puppies in a den, but no sign has been found of the remaining dogs, and we can only assume that all thirteen succumbed.

Along with Dr Pieter Kat of the National Museums, we have been sampling blood from dogs antibody analysis. Dr Kat has been collecting samples in Kenya and we hope to throw some light on this neglected area of research soon. One thing is sure, the dogs' intense sociality leaves them highly susceptible to any contagious condition they may encounter.

Other factors mooted for their decline include habitat restriction and competition with the spotted Hyaenas. Hunting dog packs range over large areas, an average of 1500 km² on the Serengeti short grass plains. Even in the thick bush of the Kruger National Park where their main prey are the resident iampalas, Allen Reich found that pack home ranges averaged 5-600 km². Such extensive home ranges mean that small protected areas provide inadequate space or at least that the dogs will be forced to spend time beyond park boundaries. Such roamings are bound to bring them into conflict with people and with vehicles.

Hunting dogs do appear to be seriously at risk on roads both inside and outside parks. Since October 1985, three dogs have been killed on the main road that crosses the Serengeti. The Morogoro - Mbeya road that bisects Mikumi National Park accounts for most of the dog deaths there, and I have received several accounts of dogs being killed elsewhere - the most recent being of a male dog found dead on the Nairobi - Narok road, 20 km from Narok on April 24 1987.

Competition with the large, heavier spotted hyaenas has possibly played a part in reducing numbers. The Frames found certain hyaenas were persistent thieves at dog kills and that the dogs suffered serious food losses to them. Hyaenas are also a potential danger to puppies.

There is also the question of the genetic health of the species. Falling numbers inevitably increases the likelihood of inbreeding. Allen Reich recorded a case in the Kruger in 1977, where a female mated with her father and reared an inbred litter. Such behaviour is perhaps uncommon but it is more likely to occur in small, low density populations where the dogs are unable to find opportunities to outbreed. Work currently being undertaken by Dr Robert Wayne of the University of California, Los Angeles, has already suggested that, like cheetahs, hunting dogs may show low levels of genetic variability. One consequence of this is a greater susceptibility to disease.

REQUEST FOR INFORMATION

I hope that this brief outline of the hunting dogs' dilemma has gone some way to explain why we believe that work towards a better understanding of factors controlling their populations is urgently needed. In Tanzania, publicity about their plight has already had results: The Director of Wildlife has placed a moratorium on all professional hunting of the species from the start of the new season, on 1 July 1987.

Well within living memory, hunting dogs were widespread in East Africa, they are now endangered. More information about the remaining packs is urgently needed if comprehensive action is to be taken to conserve the remaining groups. The Editor has kindly allowed me to place this request for information in the *Bulletin*. I have already received a number of records, but every one counts and I entreat anyone reading this request to send me what information they have.

Essentially, any information is better than none, but wherever possible the following will be invaluable: a date and location for any sighting of dogs, pack details including the number, age and sex (details of denning packs are especially important). Please do not be put off by this call for detail, ANY information counts, and will be welcome.

Records from anywhere in East Africa are needed and from any time. Older records will help to assess how population and pack size has declined. (The earliest so far, was culled from *Meinertzhagen's Kenya Diary*: seven seen on the Athi Plains on 2 June 1902).

In return I aim to keep you in touch with the picture as it develops, with the publication of updates in the *Bulletin*.

Records should be sent to : John Fanshawe, Box 41190, Nairobi.

* * * * ROAD KILLS * * * *

Please will anyone finding a Hunting Dog killed on any road telephone to Dr Pieter Kat at the National Museum (tel. 742161). Specimens are urgently needed.

ACKNOWLEDGEMENTS :

Thanks to Clare FitzGibbon for re-discovering hunting dogs on the short grass plains of the Serengeti; to the Frankfurt Zoological Society, to Mr and Mrs Neil Silverman and James Malcolm for funding our work here; to Dr Pieter Kat of the National Museums of Kenya for his support, and to all the dog watchers who have already contributed records and other useful information.

John Fanshawe, Serengeti Research Instititute, c/o Box 41190, Nairobi.

THE REED FROG *AFRIXALUS PYGMAEUS SEPTENTRIONALIS* AND IT'S OCCURRENCE IN TANZANIA

Tree frogs of the genus *Afrixalus* have variably been called Banana frogs, Leaf-folding frogs, and Spiny Reed frogs. None of these connotations apply to all members of the genus, but for brevity's sake, I prefer the name Reed frog. These tiny frogs greatly resemble the common tree frogs of the genus *Hyperolius*, for which I like to reserve the name Sedge frogs. This extends the usage of that name by Stewart (1967) to all the *Hyperolius* species.

Both Reed frogs and Sedge frogs have webbed feet and adhesive discs on the tips of the toes. One of the best identifying characteristics of Reed frogs is their rhomboid vertical pupil. By this character they can easily be distinguished from the Sedge frogs which feature a horizontal pupil like most frogs and toads. Many, but not all Reed frog species are also recognisable by the so-called dorsal asperities which are minute, often black tipped, horny spines. Hence one of their popular names is the Spiny Reed frogs (Stewart, 1967). The popular name Leaf-folding frog (Passmore & Carruthers, 1979) refers to the remarkable egg laying habits of some species. These frogs deposit their eggs, in or out of the water, on a leaf, a reed blade for example, which is then folded and glued shut.

The genus *Afrixalus* occurs widespread in Africa south of the Sahara, and 8 species have been recorded for East Africa (Schiøtz, 1974, 1975). One of these is a small savanna species *A. pygmaeus* Ahl, which might be called the Dwarf reed frog, following it's Latin name. However, it is a dwarf among dwarfs because, with a snout - vent length of *ca.* 2 cm, the species is not that much tinier than other congeners which reach at most 4 cm in the largest species.

The dorsum of typical Dwarf reed frogs is buff or golden coloured with dark lumbar bands which often reach beyond the loins up to the back of the head as two parallel dorsal stripes. In addition there is a brown lateral band passing though the eye, and a characteristic dark oblique band acro s the tibia. The ventral surface is white. The males have the dorsal surfaces beset with small inconspicuous asperities, sometimes very few with a black tip. In some populations, females also have such asperities, but normally bilharzia infection.

As outlined in the life cycle, man gets infected through water-related activities such as farming in irrigated paddies, bathing or washing clothes in contaminated rivers and dams

Since monkeys are becoming increasingly peridomestic due to their interaction with agriculture and human settlements, the chances of them getting infected with bilharzia will increase. The role they can play in the transmission or maintenance of this disease therefore needs to be evaluated if effective control of the disease is to be achieved in human populations.

My main research interest is to study the current level of infection in wild primates in Kenya (mainly baboons and vervet monkeys), particularly in those areas where the disease incidence is high in humans. The level of infection will greatly depend on the behaviour of monkeys around rivers and other water bodies. Observations on such activities are therefore necessary to determine the most likely route/s of infection.

I have therefore prepared a simple questionnaire addressed to anybody who may have encountered and observed monkeys close to water. I am particularly interested in activities related to drinking eating and playing, etc.

Any information in this respect will be greatly appreciated. Please send for a questionnaire (which will immediately be mailed to you) from:

Gerald M. Muchemi, Schistosomiasis Project, Institute of Primate Research,
Box 24481, Karen, Nairobi, Kenya.

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KIKAMBA GAME NAMES

As part of an historical research project sponsored by the Social Science Council (New York), I have had occasion to collect vernacular names of game animals in Kitui District and will be continuing to make similar collections in Kwale and Meru Districts over the coming months. Although my focus is on the history of hunting by Africans rather than natural history or zoology, I believe that readers of the *Bulletin* may be interested in this particular aspect of my work.

For simplicity of reference I have listed the English and Kikamba names of the mammals found in John G. Williams, *A Field Guide to the National Parks of East Africa*, (Collins 1967) with plate numbers when possible. My thanks for assistance in identifying these mammals are owed to Mr Samson Nyaa and his son, Steven Nyaa as well as many other historical informants who shared their time and knowledge with me (1). I would also mention that the list contains some names of animals not found in Kitui District. Quite often my informants would note this after identifying an animal by a statement such as "these are not found here but near Narok" or "They can found near the Tana River". This appears to me to be in keeping with the oft commented propensity among the Akamba for wide travel and familiarity with different regions of Kenya. Variations and discrepancies have been noted when possible and additional sources cited. I would of course appreciate any comments or corrections from readers.

ENGLISH		KIKAMBA	COMMENTS
Bat	(Plate 1)	Kavuvu (Kauvuvu)	Refers to all species.
Bushbaby	(Plate 2)	Kinongo	Cf. Spring Hare below.
Colobus	"	Ngima	Also refers to Mangabey; Lindblom *Grammar* p.96.
Gorilla	"	Sokwe	
Aardvark	"	Luma	
Zorilla	(Plate 3)	Nduu	(Swahili: msongaleli); Lindblom *Grammar* p.93 gives it for mongoose.
Ratel	"	Nding'u	
Mongoose	"	Muungu	Illustrations 5 & 6.
Mongoose White tailed	"	Nzee	Illustration 7.
Porcupine	"	Kirungu or Nzee	Interview B/4 Kioko Mulanga gives a variation: Kisera.
Buffalo	"	Mboo	
Elephant	"	Nzou	
Rhinoceros	"	Mbusia	
Zebra	"	Mbovu (Mbuvu)	Lindblom *Grammar* p.93 gives Nzai.
Hippopotamus	"	Nguu	
Baboon	(Plate 5)	Ilai or Nguli	
Vervet	"	Nzeng'a or Mboroko	
Monkey	"	Ngima	General name cf. colobus above.
Shrew	"	Kasola or Mbia	Cf. Giant rat below.
Cheetah	"	Ituli; Ikomi (or Ikunu)	The last term appears pejorative.
Caracal	"	Nzithia	
Wildcat	"	Mbaka ya Kithekani	Lindblom *Grammar* p.93 gives Kamungu.
Serval	"	Kako ka Nganga	Lindblom *Grammar* p.93 gives Kikaloma or Kilumi.
Lion	"	Munyambo	
Leopard	"	Ngo	
Hyaena, spotted	"	Mbiti	
Aardwolf	"	Muvuli	Confounded with striped Hyaena.
Jackal	(Plate 7)	Mbiwa	Refers to all three types.
Hunting Dog	"	Nzui	
Genet	"	Kimau	Also used for Civet.
Warthog	(Plate 8)	Ngii	
Bush Pig	"	Nguuwe	

ENGLISH	KIKAMBA	COMMENTS
Hyrax (Plate 8)	Kinyowe; King'oue	
Giraffe "	Ndwiya (Ndwaia)	
Duiker (Plate 9)	Kavii	Also used for Suni and Duikers in illustrations 1-4.
Suni "	Nzuni	From Lindblom *Grammar* p.93
Duiker, large "	Nzia	May be general term for antelope (2). Especially illustrations 5, 7-9.
Hartebeeste (Plate 10)	Ngondi	Refers to all types.
Wildebeeste "	Nganata	
Topi	Tope	
Gazelle "	Nzwala; Kilonga	Illustrations 8-9; Grant's and Thomson's; Lindblom *Grammar* p.93.
Gerenuk "	Katwila-mis	Lindblom's *Grammar* p.93.
Impala "	Ndatai	Also Hunter's Gazelle.
Dikdik "	Katwiga; Kavii	Also Steinbok, Grysbok Kavii (Mbii) is also commonly heard; cf. Lindblom, p.93.
Puku or Kob "	Nzala	Cf. Gazelles above.
Waterbuck "	Ndoo	
Reedbuck "	Mamonyi	
Antelope, (Plate 12) Sable or Roan	Korongo	Nzongoi per interview B/7 Mwaniki and Musyoka.
Oryx "	Nzongoi	
Kudu "	Malu	Also Vong (?).
Eland "	Ngulu	
Bushbuck "	Nzai; Nzwaia	Ndwaya (Ndoya);(3) cf. Lindblom *Grammar* p.93.
Hare, rabbit (Plate 13)	Mbaluku; Kavaluku	
Cane Rat "	Isengi	
Spring Hare "	Kinongo	Confounded with Bushbaby (?).
Flying Squirrel "	Kavuvu (Kauvuvu)	Confounded with Bat (?).
Giant Rat "	Mbia, Muli	General name for rat; Lindblom *Grammar* p.93.
Squirrel "	Nduu; Mbae	Cf. Zorilla; Lindblom *Grammar* p.93.
Antelope "	Nzwaia	Several interviews; cf. Mbiti, Vocabulary p.3.
Tortoise "	Ngu	Cf. Hobley, Ethnology p.6.
Hedgehog "	Kithangaiti	Interview B/4, Mulanga Kioko & Lindblom p.93.

ENGLISH	KIKAMBA	COMMENTS
Crocodile (Plate 13)	King'ang'i	Lindblom *Grammar* p.94, 95.

ADDENDA

Some bird names identified from interviews or readings follow :

Guineafowl	Nganga	Interview B/1, Kieti.
Dove	Ivui, Mavui	" " "
Vulture	Ndiu, Ndei	" " " (Lindblom *Grammar* p.34.).
Francolin	Kimbaa, Kikwai (4) (or Ngelele (5)	Interview B/1, Kieti; Lindblom *Grammar* p.94.
Spurfowl	Kimbaa	Interview B/7, Mwaniki and Musyoka.
Owl	Ndundu; Ndundulu	Interview B/5, Ndeve; Lindblom *Grammar* p.94.
Kite	Mbungu; Mbolosya	Hobley, Ethnology p.6 Lindblom *Grammar* p.94.
'Small bird'	Nzeo	Interview B/9, King'oku cites as bird which pointed out wild honey to ancestral Akamba.
Secretary Bird	Ndei	

FOOTNOTES

(1) Interviews conducted in Kitui are cited by number and are in the possession of the author. Previously published lists of animal names can be found in C.W. Hobley's *The Akamba and other East African Tribes* (Cambridge 1910) and G. Lindblom's *Notes on Kenya Grammar* (Uppsala 1926).

(2) Cf. J.S. Mbiti *English - Kamba Vocabulary*, p.3 where antelope is given as "nthia, nthwaaia, Ndaatai, etc.".

(3) C.W. Hobley *Ethnology of Akamba* (London 1971).

(4) Interview B/12 Kikuli gives "kikwai" as a "game bird".

(5) Interview B/7 Mwaniki and Musyoka; cf. "mwinyalelya" is given by Lindblom *Grammar* p.94 to mean crowned crane.

Dr Edward I. Steinhart, Institute of African Studies, University of Nairobi, Box 30197, Nairobi.

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LETTERS TO THE EDITOR

Dear Sir,

SOLIFUGES

On 6 June 1987, at about 4.00 p.m., I was parked at a corner where a dirt track leaves the Mombasa - Malindi Road at Vipingo, when I spotted a solifuge (camel spider) scuttle across the road. Not seeing these very often, I decided to investigate further; I followed it and saw that it was busy making a shallow depression at the base of a solitary grass plant. It did this by scrabbling around with its front legs loosening the sandy soil, and carefully keeping its long pedipalps held clear. It then bulldozed and loosened soil several centimetres clear by tilting its cephalothorax upwards and shoving the soil forward with its chelicera and the lower part of its cephalothorax. After a hollow of about 7 x 3 cm by 2 cm deep had been constructed, the solifuge started to burrow into one of its walls until, after about ten minutes, it had constructed a burrow 3 cm wide, 1 cm high and deep enough to fully conceal the creature. This ran horizontally under the roots of the grass plant.

During the 15 minutes or so that I watched this activity I saw 4 other solifuges scuttle by, including one which briefly investigated the newly constructed abode, but departed when it was greeted by a pair of raised pedipalps from the occupant. I then walked up the track for about 100 metres and counted a total of 18 more. They were all of the same species, being 4 cm (body length) and chestnut brown with darker brown chelicera. I have never seen such a concentration before. Is this unusual ?

There was also what I took to be an all-black spider hunting wasp searching the area. Had she got the scent of the solifuges ? Do any wasps parasitise solifuges ?

Colin Ryall, Box 88692, Mombasa.

Dear Sir,

EUROPEAN BLACK STORKS

P.G. Volrath's report of 2000 European Black Storks near Nabiswera, Uganda in the June issue of the *Bulletin* is certainly of interest. The Black Stork is a regular winter visitor in small numbers to East Africa and the bulk of the reported sightings are from Central Kenya, particularly in Nairobi National Park.

There are very few records from Uganda and Margaret Carswell documents only two sightings in *Birds of the Kampala Area*.

It seems likely that these storks may have been confused with the very similar Abdim's Storks which do occur regularly in large flocks particularly in November and in February of some years.

D. Richards, Box 24545, Karen, Nairobi.

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MIMICRY AND DECEPTION IN BUTTERFLIES

AN ACCOUNT OF DR I. GORDON"S LECTURE TO THE SOCIETY

On 10 August Dr I. Gordon presented a well illustrated and fascinating lecture on mimicry in African butterflies. He explained the Batesian mimetic theory, showing examples of African models and mimics from the families Danaidae and Papilionidae and Bematestes and Nymphalidae being models and mimics respectively. He showed how this related to female forms of *Papilio dardanus* where the female forms gain protection from predators (mainly birds), by resembling the models. The models are distasteful to birds due to Cardiac Glycosides in the body which are derived in the adults from the food plants on which they feed.

Dr Gordon showed the same basic pattern phenomenom also exists in males with Danaidae and various *Hypolymnas* (Nymphalid) species. He then went on to describe his own work on *Danaus chrysippus* (African Queen) and *hypolymnas misippus* (Diadem) largely carried out in Ghana but also from Zimbabwe, where only one form of the model occurs. The four various morphs of the Diadem female occur but not necessarily in the highest frequency of occurrence of the mimetic form to the model. This was the case in Ghana/Zimbabwe, closer in Tanzania and only in Uganda, where all four forms of model occured did the occurrence model/mimic ratio come out as one might predict.

Back in Ghana, where Dr Gordon worked for several years, he showed us slides of the food plants of both model and mimic, both were abundant in the botanical gardens where he carried out his experiments. Samples of populations of mimics over a four month period before, during and after the rains (March - June), were taken by a mark and recapture method. Two different mathematical formulae were used to estimate absolute populations which peaked just after the rainy season.

Sub-sampling within the different morphs of the mimic showed selection of females against the non-mimetic forms and that, in fact, the mimetic form definitely appeared to be deriving some form of protection. It was suggested that the White-throated Bee-eater might be a possible predator, although the speaker had never actually viewed predation during his period of study. Drongos and Shrikes were considered as other possible predators. Dr Gordon is at present continuing his studies on the African Queen/Diadem in Kenya.

The lecture raised several questions :

> Had Dr Gordon sampled the ratio of models to mimics in the population. He said that he had and that obviously a higher ratio of models/mimics was desirable to have protective benefits.
>
> Dr Cock asked if he had scored the incidence of bird beak marks on the model's wings. Dr Gordon replied that the model's wings were fairly fragile and easily damaged and might be difficult to attribute directly to birds. Dr Cock suggested that it might be useful to use the model for this estimation as distasteful, and would likely be rejected by the bird. Dr Gordon agreed that this would be interesting.

Dr Gordon encouraged anyone interested in butterflies to try some mark and recapture experiments, simply marking with a broad tip felt pen on the underside of the wings, and seeing recurrece was an interesting process. His own recapture levels were running at about 10%, just for the record.

S.C. Collins, Box 47686, Nairobi.

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VISIT TO SIBILOI NATIONAL PARK

It was time to visit Sibiloi again: I have not been there for some 5 years. To go there just after the rains and to see the desert in its wedding dress was an old desire. Two of the three airfields in Koobi Fora being unserviceable, and the third too short, we had to fly to Allia Bay and make arrangements with the National Museums to get transport to Koobi Fora. It must be one of the most spectacular routes in the world: to fly along the Aberdares, over the salient, glance at Mt. Kenya, to cross the now green ranches of Laikipia, see the Mathew's range and the Ndutus; cross Mt. Maralal and Porot, pass abeam the Nyiro and descend into the rift, just west of Teleki and Von Huehnel and then cross the lake next to South Island. What a treat for our guest Peter from Edinburgh, to read aloft Sunbird Aviation's instructive little handout on the geography and the history of the lake and its surrounds, so artfully composed by Fiona Alexander! And for Malindi to see her home, Gatab on the top of Mt. Kulal on the horizon!

Allia Bay airfield sported a windsock, and the markers were freshly whitewashed. The National Museums car was there, and Mathew the guide took charge of us. First we went to the headquarters to pay our dues ('hakuna change' - as always in every park!). The headquarters are quite dilapidated now, and the entire motor pool of the park - fittingly - in a state of fossilization with the exception of a huge green grader, which, even some 7 or 8 years ago was the only serviceable vehicle and as such, had to do the odd jobs, including the towing of the broken down Kombi of the writer.

Thanks to the grader, the 50 odd kilometres on the Ileret road were quite comfortable. Thanks to Mathew, we started to understand the jumbled geology of the area, the inselbergs, the volcanoes, the formation of strombolites, the former beach sediments and the history of the fossil-bearing strata. Thanks to the rains, the desert was indeed in breeding dress: grass, in places lush, greening comiphora and countless little flowers - red and pink and purple, yellow, orange, blue and white. Malindi knew most of the Samburu names of the plants. Mathew, some of the scientific ones, but botany being one of our weakest points, we just marvelled at the beauty. Although the Palaearctic migrants have all departed, there were birds everywhere, and along the road - Namaqua dove, chestnut-bellied sandgrouse, pratincoles, Somali bee-eaters and Heuglin's bustards particularly conspicuous. A fan-tailed raven was persecuting a rather phlegmatic tawny eagle and, diving at the eagle, it actually touched it several times. There were many Grant's gazelles, common zebra and the handsome tiang - a race of the topi. There were plenty of dik dik; I though Guenther's, but Martha was not convinced when I showed her what is described as a prehensile muzzle.....
Then we saw *Elephas recki*, the huge ancestor of the Asian elephant. The tusks of this fossil (I keep forgetting 1.5 or 2.5 million years?) are more than twice as large as those of Ahmed, and a barn owl keeps him company. The carapace of a tortoise - I do not know how many years old - increased my yearning for a bath, and soon after we were in camp, all except Peter who did not like the idea of sharing his bath with crocodiles, feeling fresh and clean. As there were no fossil hunters and no palaeontologists in residence, we were housed in the main camp, not in the little bandas up on the bluff, next to the museum. Not only were we comfortable, but yet again amazed to experience the order and efficiency with which the camp is run: the staff welcoming arrivals with a jug of cold water, cars in working order, radio serviceable, bandas clean and beds made.

The evening sky was dazzling, there was no moon and the stars were so many more than one usually sees, that it was difficult to find the dozen or so we ought to know.

During the night, it started to rain and it rained heavily. In the morning the lake looked like a loch: one could not see far, and the low stratus clouds were drifting at the height of the roofs, which incidently did not leak, or anyway did not leak much, and it kept on raining.

Mathew who has lived in Koobi Fora for 10 years now, claimed that he never saw such rain. So, instead of a game drive and fossil hunt, we went to the museum. I was surprised to be greeted at the door by a lady (?) *Homo erectus* with what used to be called 'the German salute' for some twelve years of my youth but alas, there she stands hailing the visitors. The museum is rather nicely set out, and the explanations are excellent, whether about the geo-history of the area, the hominids, *homo* his tools and habits, the risk of indulging in eating too much raw liver, or the present geography of the area. Mathew stood his ground under a barrage of questions - although his assertion that *habilis* was ANCESTRAL to *erectus* was not convincing. The rain stopped and we decided to explore the northern reaches of the park. We did not get far because our landrover sank, and some hours later, muddy but cheerful, we were back in camp. By now there was a little sunshine, so we walked along the spit and there they were, the shy crocodiles of Turkana, basking in the evening sun, some of them formidable giants. There was a carmine bee-eater perched on the back of a kori bustard hawking insects from there. I have never heard of that before.

The sunset was of the kind one does not see often - a ten minute drama of colour change enacted between two layers of cloud: an altocirrus and a stratocirrus, mirrors of gold and orange and mauve.

Later in the evening, I had a sneaking suspicion that the next day would be one of trials and tribulations. Mathew said that if a certain lugga, halfway to Allia Bay was full of water, we might just not make it to our aeroplane. At 6 o'clock in the morning, we set off. The day was bright, and soon we met a very good looking striped hyaena. We had to cross many rivers, creeks and puddles and had to find ways round flood plains. After some two hours of driving and walking, we were almost at the lugga when, because of a misunderstanding between the driver and the scout, our vehicle sank. It did not just get stuck, it sank, and the mud was gurgling around us and when we tried to walk from the car we sank too, Martha lost her shoes.

Elephas recki and that tortoise must have found themselves in the same predicament. But we had a Tanganyika jack and a spare tyre to perch it on and a panga (less sharp though, than the scrapers of *Homo erectus*). Moreover, we had a determined Yorkshireman, Peter, who was not going to miss British Airways at midnight! The problem was compounded by scorpions - some of them huge and very ill tempered, obviously washed down with the deluge on the previous day (they should have been grateful for being dug up and rescued).

Peter who is a private in the Queen's company of Green Archers, or some medieval outfit of a similar name, did not like the scorpions. Anyway, after some three hours, we were mobile again and on our way back to base. Soon we met the rescue car dispatched to look for us (so efficient is the staff at Koobi Fora), and after a short 'baraza', the other car hurried off to get the boat ready.

The unique big rain in the desert made us the beneficiaries of a bonus: a boat trip to Allia Bay. We had a first class coxwain, a favourable wind, and our fabulous journey took us along the shoreline, where everyone assembled to see us off: there were crocodiles and schools of hippos, hundreds of zebra, tiang and gazelles also thousands and tens of thousands of birds, maybe a hundred thousand flamingoes in the bay. Knowing that only the grader was in working order, and that we would have to transfer from one terminal to the other on foot, we did not sail for the camp but straight towards the windsock, and ran from the beach to our aeroplane, upsetting hundreds of waders from the puddles on the way.

We flew to Lodwar to refill. Central Island was green, and its lakes sparkling. By this time both escarpments of the rift valley were flanked by dark cumulo-nimbus clouds. It was for the first time that I saw rain from the Sudan-Ethiopian border to the Tanzania border along the whole of the Kenyan rift valley. The rivers were in flood. There was a little sunshine coming through between the shifting clouds and the great black curtains of water. The hills were dark green and their craggy contours sharply drawn. Our path in the middle of the valley was clear and marked by huge arches of rainbow.

Imre Loefler, Box 47964, Nairobi.

SOCIETY TRIP TO IRULA ESTATE

At the kind invitation of Mr & Mrs R.A. Simpson, the EANHS invaded the Irula Estates at Ilkek over the weekend of 4 - 5 July. This 30.000 acre ranch is located about midway between Naivasha and Gilgil and the entrance off to the left of the main road is conveniently located a few hundred yards short of the toll station which delighted those of us who feel Sh.5 saved is Sh.5 earned.

Around 14 groups. led by Dorrie Brass and Yvonne Malcolm-Coe straggled into the campsite at intervals on the morning of the first day, and once the pounding of tent pegs had subsided, settled back to appreciate the beauty of their surroundings.

The site selected by the Simpsons was magnificent, with a surprisingly varied terrain in our immediate vicinity. Our tents clustered along the Gilgil River, and recent rains had made the riverine forest, that entwined the stream, lush with flowers in full bloom which Peter Le Pelley identified for those who speak Latin.

Across and beyond the stream gently rolling pasturage supported notable herds of zebra and Tommies, while 2 - 3 kilometres further on a 2,000 foot ridge beckoned the more energetic hikers with a yen to explore while dodging buffaloes.

Behind us loomed an impressive cliff with intriguing caves (and a not so intriguing troop of baboon), where rock hyrax and Nyanza swifts were in residence.

Flowing towards Lake Naivasha, the river soon passed through a substantial gorge, but an easy stroll along its edges permitted the luxury of spotting tree-top varieties of birds while looking down. This is something anyone who has suffered from acute Kakamega torticollis, incurred by peering upward into tall trees will appreciate.

Only one member disappeared when an undercut bank of the canyon collapsed, but being confident of the resilience and self sufficiency of EANHS members, I am sure he will show up in due course. Perhaps he has arrived in Lake Naivasha by now, since when last seen, he was displaying a strong butterfly stroke in the waters far below. We would have offered more assistance except at that moment were preoccupied with a swarm of White-throated Bee-eaters and a pair of dik dik that had wandered into close range and one must keep one's perspective. After all, the object of the expedition was the local flora and fauna, not First Aid in the Field.

A natural amphitheatre near our tents was generously supplied with precut firewood, and a warming community bonfire cut the chill of the evening. The bush-wise amongst us, (equipped with the truly essential camping gear) further reduced the cold factor with judicious doses of sherry and cognac as comparative strangers became bosom buddies in short order, and those disputes about whether that "brown job" seen today was a Pectoral-patch or a Rattling Cisticola subsided into blissful unanimity.

A pair of ranch dogs adopted our group with tail waving enthusiasm verging on hysteria, and spent the entire night patrolling our area. The one outside my tent must have had a touch of indigestion so moaned loudly in his sleep every five minutes, but would be up in full protective cry every time the Spotted Eagle Owl hooted or a baboon barked. It's so nice to feel safeguarded from attack by Red-eyed Doves or other dangers of the African night, but some sleep would have been nice too.

All in all a most pleasant and instructive weekend with a congenial, active and knowledgeable group of fellow members - - the trademark of a Society outing.

Bill Shadel, Box 44486, Nairobi.

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SCOPUS

The Society's Ornithological Sub-committee produces a journal *Scopus*. Four regular issues are normally published each year. These contain short or medium length papers and short notes dealing with the distribution, identification and behaviour of birds in eastern Africa. Notes on occurrences of birds new or unusual in Kenya, Uganda and Tanzania are frequently included. In addition to the regular issues an annual East African Bird Report forms a fifth issue of *Scopus*. Larger supplements are also produced from time to time. *Birds of Somalia* and *Birds of the Kampala area* have already been produced in this series, the *Birds of South Sudan* is in preparation.

For example, the most recent issue of *Scopus* (Vol.11 No.1) includes the following:

L.A. Bennun. Ringing and recapture of Spotted Ground Thrushes at Gedi, Kenya.

Brian Wood. Hunting technique of the African Goshawk.

N.E. Baker & P. Hirslund. Minziro Forest Reserve: an ornithological note including seven additions to the Tanzanian list.

P.B. Taylor. Mackinder's Eagle Owl breeding in the Kenyan Rift Valley.

Bernard Boothroyd. Additional Marabou colony in Kenya.

P.J. Oliver. Raptor counts in Kenya, 1973 and 1983.

A.D. Forbes-Watson. Frugivorous pelicans: fish or fig?

The annual subscription to *scopus* is K.Shs.100 for East African residents. This is payable to D.A. Turner, Scopus a/c, P.O. Box 48019, Nairobi.
New local subscribers are particularly welcome.

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JOURNAL

The Society publishes The Journal of the East African Natural History Society and National Museum. Each issue consists of one paper, however, sometimes two or more short papers may be combined to form one number. The aim of this method of presentation is to ensure prompt publication of scientific information; a title page is issued at the end of each year so that the year's papers may be bound together. Contributions, which should be typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five reprints of their article free, provided that these are ordered at the time the proofs are returned.

E.A.N.H.S. BULLETIN

This is a duplicated magazine issued six times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (EANHS Bulletin), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

SCOPUS

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Notice: The last issue of the Bulletin was erroneously numbered No.4. It should of course have been Volume 17 (3) September 1987

The brown trout is one of the species of the genus *Salmo* which includes the rainbow trout *Salmo gairdneri* and the Atlantic salmon *Salmo salar*. The cutthroat *Salmo clarkii*, familiar to American fishermen, is also a member of this genus but the so-called American brook trout *Salvelinus fontinalis* is in fact a species of char.

The rainbow trout is indigenous to Western North America and was imported into England in 1882 while the brown trout is indigenous to most European countries, Western Asia and the Atlas Mountains in Morocco and Algeria. There were originally no trout at all in the Southern hemisphere until, after much trial and error, the science of packing eyed ova (fertilised eggs) among large blocks of ice in suitably insulated compartments was refined to an extent that facilitated their transport to potentially suitable localities far outside the trout's original range.

1864 saw the first successful attempt at long distance transport of ova with the hatching of a fair proportion of a consignment to Australia and Tasmania; this created a resident breeding stock from which further stockings subsequently took place in suitable localities in Australia and, shortly afterwards, New Zealand. Attempts to introduce trout to South Africa were modelled on the Australian efforts and in 1890 sucessful introductions were made into Natal and two years later, the Cape.

Trout were first brought into Kenya in 1905 as the result of the personal efforts of Ewart Grogan; the spur to these efforts was apparently not Grogan's own love of trout fishing (if indeed such existed) but rather an almost altruistic wish to enhance the attractions of Kenya to potential settlers. The first consigment consisted of both brown and rainbow trout ova and with considerable difficulty the eggs were rushed up from Naivasha on the Nyeri track to its crossing of the Gura river on the top of the Aberdare Mountains at some 3 200 m; here they were deposited in the river and then left to their own devices for three or four years by which time Forest Officers had reported seeing fish spawning much lower down the river and experimental fishing produced catches of large trout.

Thereafter several other importations of brown and rainbow trout ova took place both from England and South Africa and a hatchery was established on the Kinangop plateau from which many of the rivers rising in the Aberdares and Mount Kenya were stocked. Subsequently, trout were introduced into the rivers flowing off the Mau escarpment both down into the Rift Valley and towards Kericho as they were into streams on Mount Elgon and the Cherangani Hills; today trout are found in nearly all these localities, in most cases in self-sustaining populations. Trout ova of both varieties were also sent to Uganda and Tanzania in the early 1930s but while trout still survive in parts of Tanzania one can only speculate on the present-day status of trout in the Ruwenzori mountains of Uganda. As recently as the 1970s trout were also introduced into the Bali Mountains in Southern Ethiopia where they have bred successfully and several rivers there now have thriving populations.

Once introduced, both brown and rainbow trout adapted quickly to their new surroundings, breeding successfully in most of the rivers and thereby increasing their range within any particular river; rainbow trout can live and breed in rather warmer water than can brown trout so at lower altitudes the rainbow was found to be more suitable than its brown cousin and today the brown trout is only found in a minority of streams. American brook trout were experimentally introduced in small numbers to one or two selected localities including Lake Hohnel at above 4 300 m on Mt Kenya in 1949, but such introductions were unsuccessful.

Apart from an adequate food supply the most important factors in determining whether a particular river will sustain a trout population are the temperature of the water and its oxygen content. The minimum temperature for trout survival is just above freezing point and at the upper end of the scale brown trout can survive in water with a temperature as high as 77°F and for short periods in still warmer water, while rainbow trout can tolerate even higher temperatures. However, the higher the temperature the higher must be the oxygen content of the water (since trout need more oxygen in warmer temperatures) and in addition, the amount of oxygen which can be dissolved in any given volume of water falls as the temperature rises.

The net result of these factors is that trout are unlikely to thrive in water with a temperature in excess of 70°F for any length of time unless it is very heavily oxygenated. These requirements transposed onto the East African topography mean that 1 800 m is the average lower altitudinal limit of the trout's range. However, this limit will vary depending firstly upon the oxygen content of the water at that altitude (itself determined by the formation of the river bed and its gradient) and secondly upon the water temperature (which will vary according to the altitude at which the stream originates, the speed at which the water reaches the lower levels and the extent to which the riparian vegetation shields the water from the sun).

Trout require running water in which to breed and the temperature variations within which trout eggs can hatch successfully are more restricted than those within which an adult trout can survive and grow; the maximum optimum figure is about 55°F which again when transposed into East African terms means that broadly speaking trout will breed at altitudes down to about 3 600 m, but subject to similar considerations as would prevail with regard to their lower limit for general survival.

It is therefore apparent that trout can survive and flourish at altitudes well below those at which they can successfully breed and this helps to explain why the upper reaches of most East African streams contain prolific numbers of small fish while lower down the fish tend to be larger but scarcer. Further, because the stretches of river in which the trout are breeding are near the river's source the river is narrow and food supplies are restricted, while lower down the river is larger and sustenance more plentiful.

The Kenyan rivers colonised by trout over the past eighty years were ideal for their introduction, not only because the temperature, chemistry and food supplies of the rivers were ideally suitable for trout but also because there was generally no piscatorial competition for available food supplies. Scientific dogma may tell us that there is no such thing as an ecological void or a vacant niche but there was certainly a piscatorial void in the high altitude streams when trout first arrived. The obvious correlation to this was a complete absence of natural fish-eating predators, although in time various animals and birds extended their diet to include trout while other predators from lower altitudes extended their range up to the trout-occupied reaches.

In the lower altitudes there were indigenous fish but such fish were confined to their lower altitude habitat not least by a succession of large waterfalls; these falls characterise certainly most of the Aberdare streams which drop steeply through a series of faults in the rock strata producing quite impenetrable barriers to any fish with an inclination to move upstream. Trout can survive a substantial fall provided there is a deep pool at the bottom, and thus downward progress from original high altitude stockings was only checked by the gradual unsuitability of the actual water conditions and to a lesser extent by competition from other fish.

The original inhabitants of the lower altitude streams included a small species of catfish *Amphilius grandis* and a local member of the barbel family *Barbus tanensis*, which was commonly called a yellow-fish. These yellow-fish were regarded as sporting fish and were quite often caught by fishermen on flies intended for trout although their shoals would seem to have disappeared downstream in areas of competition with trout and they are now not often encountered. However, this may simply be because the lower altitude reaches are not now sport-fished as they were and therefore data is scarce or because the Kikuyu, through whose land the majority of trout-stocked streams flow after leaving the forest, have developed a taste for fish which did not exist some thirty years ago. There is also an eel known as the spotted eel *Anguilla labiata* which not only occupies the lower levels of trout-inhabitated streams alongside the trout but is also one of its principal predators at such levels; this eel reaches weights of over 10k and will attack large trout without hesitation.

The trout's other predators are principally two mammals and a number of different birds. The Cape Clawless Otter *Aonyx capensis* originally occupied the banks of many of the streams into which trout were introduced, up to a relatively high altitude, and there is little doubt that the trout's introduction has strangely had an adverse effect on the otter population since both trout and otters compete for freshwater crabs as an item in their diet and certainly in the case of the otter, a very important one. This particular species of otter is especially equipped with a broad, flat skull and exceptionally prominent molar teeth which enable it to deal with the hard shells of crabs and other aquatic animals. It numbers frogs, eggs (of birds, lizards and crocodiles) and maize cobs amongst its other food sources but is less aquatic than other otters and may have difficulty in catching trout. Examination of otter droppings beside a variety of different streams never seems to reveal fish bones although a digestive system equipped to cope with crab shells may break down a fish bone unrecognisably. The otter's probable decline in numbers gives reason for thinking that it has not taken advantage of the advent of the trout population to compensate for the corresponding decline in the availability of freshwater crabs. However, the species is largely nocturnal and each pair has always required a large territory so their numbers may not have been so severely affected by the introduction of trout as earlier trapping programmes led researchers to believe; certainly faecal evidence of the otter's presence is freely distributed up and down nearly every suitable river bank.

The Marsh Mongoose *Atilax paludinosus* is the other mammal to include trout in its diet, quite possibly to a greater extent than the otter; it is an excellent swimmer and its general diet is similar to the otter's. Again however, being nocturnal and often solitary, little is known of its range and distribution or of its effect on the trout population; it would seem to frequent the lower reaches of trout-occupied streams but as trout naturally become scarcer as water conditions gradually become less suitable, this mongoose's impact on the trout population is difficult to assess.

Birds are perhaps the trout's greatest enemy, especially in the clearer waters of the higher reaches of trout streams, and there are a variety of species which include the trout as a more or less important item in their diet and in some cases have extended their range considerably as a result of the trout's introduction.

The Giant Kingfisher *Ceryle maxima* has certainly developed a taste for trout as an addition to its original diet which relied heavily on crabs. This splendid bird is now most frequently found on highland forest streams and certainly consumes large numbers of small trout when available; it is probable that by helping to keep down any surplus population and therefore reduce overstocking its influence on trout populations from the fisherman's point of view on most streams is generally beneficial. It divides the river into definite beats like the otter and favours overhanging branches which it can use as a vantage point from which to spot its prey.

The Fish Eagle *Haliaeetus vocifer*, and the Long-tailed Cormorant *Phalacrocorax africanus* are now found along the edge of streams containing trout up to altitudes of over 3 000 m from which they were almost certainly previously absent.

The writer of the 1952 Review of Kenya Fisheries reports that on the rearing ponds (which must not be taken as providing an environment which can in any way be equated with the wild conditions in which trout usually find themselves), not only did an otter have to be shot but that when it came to preying on trout "the worst offenders were Hamerkops" (*Scopus umbretta*) one of which was found with 15 two-inch fingerlings in its stomach However, it is difficult to see Hamerkops having any marked effect on trout populations in a wild environment even though they may manage to catch an occasional trout as may any itinerant osprey, heron or stork which finds itself in the vicinity of a trout stream.

The trout's adaptability is self-evident from the success with which it has been introduced all over the world. Much of this success stems both from the fact that the trout is very adaptable in its feeding habits and also because many of the families of insects which form its principal food source in its native lands are well represented by different species in the countries of introduction. The freshwater crab does not form part of the average trout's diet in the Northern hemisphere but plays a prominent part in that of many trout in Kenya. Small fish (the catfish *A. grandis*) are taken by trout at lower altitudes and the occasional frog is available at all levels but otherwise the trout are generally insectivorous. Strangely, trout in Kenya take airborne food in the shape of hatched insects very much less than they do in their native homelands and prefer their insects in the earlier stages of their development when, as larvae or nymphs, they are more readily available and easily caught with the minimum expenditure of energy. The mayflies, caddis-flies, stone-flies, midges and dragon-flies are all well represented and their larvae and nymphs make up the greater part of the trout's food. In addition a certain amount of terrestrial insect life is consumed according to availability, and ants, grasshoppers, caterpillars, spiders, bees and wasps are all devoured from time to time, safari ants *Orylus helvolus* being voraciously consumed as they fall off overhanging branches into the water.

The dangers of introducing any species of animal into an alien environment are now well known and the long-term consequences are fortunately given more consideration than was the case in earlier years. However, the introduction of trout into Kenya (and many other countries) has, more by luck than better judgement, had virtually no visible, adverse consequences on the existing fauna; in fact it has actually encouraged the spread of various species of bird as well as giving immense pleasure to trout fishermen over the last seventy odd years. Further, the trout has provided an additional food source for those people living along the banks of the streams into which it has been introduced and it is a relatively easy fish to rear for stocking purposes or table consumption, given the right conditions.

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LIVING WITH A HOLE IN YOUR SIDE

A male buffalo was seen by DEP in mid-March 1985 on the southern side of the Kazinga Channel about ½ km from Kazinga fishing village. It had a hole 10 - 15 cm in diameter on the left side just below the spine and slightly more than halfway from the base of the neck to the root of the tail. A slurry of partly-digested material was oozing down the animal's side and quite a lot was escaping. However, it looked plump and in good condition. The animal was in the company of another bull. Further enquiries from the Chief Park Warden revealed that the animal had been in that state from about November 1983. Presumably the hole was caused either by an attacking lion, or another buffalo.

The bull was seen again in June 1985. It was still in the same area in the company of another bull. The wound was open but the area of slurry was smaller than in April which led us to suspect that the hole was closing. The animal still looked healthy. On five subsequent occasions in June, July and August 1985, the 'fistulated' bull was in the same area in the company of one or two other bulls. The hole was still open but the animal looked fit.

Whenever it had to lie in water, it would lie on its right side. At other times it would remain standing while the other bulls were lying in the water. This was probably a strategy to avoid water getting in through the hole.

The animal was observed monthly in the same general area throughout 1986. However, it had begun appearing thinner than previously towards the end of June. By mid-September, however, its condition seemed to have improved although this did not last very long because from mid-December until mid-February 1987 the bull was emaciated. This is understandable in view of the fact that this is the driest time of the year with food more difficult to come by. The bull was not seen again after mid-February although PMBK continued regular visits to the stretch of shoreline where it had normally been seen. In April 1987, we were informed that it had died in mid to late February. It had lived with a hole in the side for 3 years and two months. This was no mean achievement given that a large proportion of the food ingested had been escaping through the hole!

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NOTES ON A HEDGEHOG *ERINACEUS FRONTALIS*

On 26 August 1985 a very small hedgehog was found wandering about in broad daylight near my car, parked in the garden. No adult hedgehog was found nearby. I fed the baby with milk which it readily took.

As I was about to leave on a safari of several weeks I asked the KSPCA to look after it for me until my return. This they kindly agreed to do.

When he was returned - it was a male - on 20 October, he had grown enormously. I placed him into the Hyrax enclosure, and area of 6 m x 11 m enclosed with wiremesh dug into the ground about half a metre deep. There is no artificial flooring and a large amount of litter is heaped up around the edges, consisting of dried branches and leaves and the debris of the Hyrax's food. This forms a tangle of approximately 45 cm wide and 30 cm high all round the walls.

The little hedgehog dug himself tunnels into this debris at various points and seemed to use different holes at different times. Some of the tunnels were quite deep so that I could not see the hiding animal even when peering into the tunnel.

Minced meat and baby cereal with lots of milk was set out every evening on the ground. Piggy, as I called him was strictly nocturnal, and every morning the food had been consumed. After a few months, however, the mincemeat was left uneaten and when I realized that it was no longer required, I discontinued offering it. The Hyrax always left the food strictly alone.

Occasionally I stayed in the enclosure to watch Piggy and to weigh him when he let himself be caught. I never saw him emerge before dark, about 8 or 9 p.m at the earliest. During the night he emerged occasionally, moved about, foraged, then returned to one of his shelters. The Hyrax were mildly interested, sniffed him on occasion, although Piggy paid little attention to them.

In March 1987 I found a dead mouse *Mastomys* sp. on the ground in the enclosure with part of the neck eaten. I knew the Hyrax would neither kill nor eat a mouse and I wondered if it could have been the hedgehog. Alec McKay, who kindly identified the mouse, assured me that the hedgehog was the one to have killed and eaten it. When I returned the mouse carcase to the enclosure, some more meat was taken during the following night, but the carcase was not wholly consumed.

Piggy seemed to be doing well, consuming his milkfeed every night and being quite active whenever I saw him. However, one day during July 1987 he was found dead in the morning in the middle of the enclosure.

The post mortem examination revealed lumps in his lungs which, according to the pathologist, could have been tumours or the result of an infection.

Following are the results of periodic weighings:

August 1985	35 g	A few days old?
Oct. 1985	275 g	Approx. 2 months old
Nov. 1985	375 g	Approx. 3 months old
July 1986	500 g	1 Year old
July 1987	600 g	2 Years old

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ADDITIONAL NOTES ON THE VEGETATION OF THE CHERANGANI HILLS, AND A KEY TO THE SHRUBBY ERICOID SPECIES

In October I took part in a Mountain Club safari to the Cherangani Hills. We camped at 3 100m altitude in a forest clearing in the upper Arror Valley, after a relatively easy drive up from Kitale by way of Kapcherop and Tangul. The condition of the road after Tangul makes four wheel drive essential.

The forest in the upper Arror consists of just four canopy tree species - *Maytenus undatus*, *Juniperus procera*, *Hagenia abyssinica* and *Afrocrania volkensii*. Not a single tree of another species was sighted. In the undergrowth *Lobelia gibberoa* is conspicuous, reaching a height of up to 7 m. At this altitude various plants occur from genera known to northern botanists, such as *Corydalis* (fumitory), *Galium* (bedstraw), *Verbascum* (mullein), *Rubus* (bramble) and *Afrocrania* (dogwood).

Above the forest, at about 3 200 m, there is a thin belt of bamboo, above which the heath zone and the moorlands begin. Vegetation belts in the Cheranganis are rather mixed up, as burning and clearing of the forest has disturbed the natural sequence; also the local farmers clear the bamboo and use it to construct beautifully woven withy-fences around their homesteads.

The moorland is quite similar to that of our other high mountains. A good description is given by Mabberly (1975), still available at the Society office. Mabberly also gives a list of afroalpine plants not recorded from the Cheranganis by Hedberg (1957). From strolls up Kamelogon and Kokwa Ara, two of the highest hills of this range, I am able to add more new records, as well as more altitude data. The numbers are those of my collections, the first set of which is deposited at the East African Herbarium (EA).

Ranunculus volkensii (Ranunculaceae/3377). In swampy sites and in small pools on Kamelogon, 3350 m.

Hypericum revolutum (Guttiferae/sight record. Midslope of Kamelogon 3400 m.

Trifolium buerchellianum ssp. *johnstonii* var. *oblongum* (Papilionaceae/3379). A woody clover, from the top of Kamelogon, 3500 m.

Philippia excelsa (Ericaceae/3380). Tree heath to 7 m tall, near the top of Kamelogon, 3450 m.

Galium ruwenzoriense (Rubiaceae/3363b). Climbing bedstraw to 2 m long in the upper bamboo zone, 3300 m.

Euryops brownei (Compositae/3372). Very common ericoid shrub to 1 m tall, from the heath zone to the top of Kamelogon (3500 m).

Senecio purtschelleri (Compositae/3378). Sticky herb, frequent in moorlands up to the top of Kokwa Ara and Kamelogon (3500 m).

Swertia kilimandscharica (Gentianaceae/3368). Throughout the moorlands, 3300 - 3450 m.

S. crassiuscula (Gentianaceae/3374). Common throughout the moorlands, 3300 - 3500 m.

S. lugardae (Gentianaceae) Occasional from 3300 - 3500 m.

Craterostigma pumilum (Scrophulariaceae/3394). Not mentioned by Hedberg for any of the mountains, but here certainly an afroalpine species, occuring locally in the moorlands at 3300 - 3400 m.

Dierama pendulum (Iridaceae/3357). A graceful purple-flowered herb, occasional in the moorlands up to 3450 m.

Between the bamboo zone and the moorlands of Kenya mountains, the heath zone is a conspicuous belt with its tree-like heaths reaching up to 8 m tall. Although Young (1985) gives a vegetative key to the species of Mt. Kenya above 3500 m, because of his lower altitude limit of 3500 m he omits several of the ericoid species common in the heath zone. These ericoid species are characterized by their narrow leaves, less than 2 mm wide. The following key might help identification.

1. Leaves greygreen, densely pubescent	*Stoebe*
Leaves green, more or less glabrous	2
2. Leaves more than 7 mm long	3
Leaves less than 7 mm long	6
3. Leaves overlapping, appressed, somewhat fleshy	*Struthiola*
Leaves not appressed, not fleshy	4
4. Leaves in whorls at intervals, with stipules	*Anthospermum*
leaves not in whorls, without stipules, usually evenly spread	5
5. Leaf scars on upper part of stem dense, covering the stem	*Euryops*
Leaf scars on upper stem sparse	*Hebenstretia*
6. Leaves overlapping, scale-like, without stipules	*Erica/Philippia*
Leaves in spaced bunches, with stipules	7
7. Leaves 2 - 15 mm long, with toothed stipules	*Anthospermum*
Leaflets 4 - 7 mm long, with single-tip stipules	*Cliffortia*

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(The last two publications are available at the Society office).

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MERU (IGEMBE) GAME NAMES

These Meru (Igembe) game names constitute the second instalment of my collection of vernacular names of game animals in connection with my historical research project sponsored by the Social Science Research Council of New York. Further lists will be published in future issues of the *Bulletin.*

The following list was collected in Kangeta Location of Igembe Division, Meru. Although the language is usually subsumed under Kimeru, I would not in the case of names assume identity, but would urge those who may be familiar with the Kimeru or kimenti terms, to compare them closely.

As in previous notes, J.G. Williams, *A Field Guide to the National Parks of East Africa.* London: Collins (1967), has been used to standardise the identifications. The informants included Paul Kubai, Lawrence Mbabu and Julius Thuranira of Kangeta (Interview C/10); Francis Kibunja of Kithetu (Interview C/12); and Stefano Mwenda of Njiamwendwa (Interview C/16). These interviews were conducted as part of my research on the history of hunting in Igembe during September, 1987 and are in the possession of the author.

ENGLISH	KIGEMBE		
Bat	Kilele	Kudu	Ntolo
Colobus	Nkoroi	Sitatunga	Ngruu
Aardvark	Ungu	Hare	Kaituyu
Bush Baby	Nchana or Nkweo	Cane Rat	Mpuku or mbea
Galago	Nthere	Spring Hare	Mpue
Zorilla	Uko or Ntuli	Squirrel	Nduru
Porcupine Nchege	Nchege	Ground Squirrel	Munuu or uku
Mongoose	Kinyoro	Crested Rat	Ntole (5)
Large grey	Nthere or Mothabaine	Giant Rat	Ikendu
White-tailed	Nthere or Ntole	Hedgehog	Kalianyung'u
Marsh	Kithengerethe (cf. Civet)	Crocodile	King'ang'i
Banded	Mothabaine		
Buffalo	Mbogo		
Elephant	Njogu		
Rhinoceros	Mpuria		
Zebra	Nderugi		
Hippopotamus	Nguu (Nguo)		
Baboon	Nugu or Iruki pl. Maruki (1)		
Blue Monkey	Nzoro (2)		
Elephant Shrew	Mpuru		
Cheetah	Ntebi, meri or nkoloma		
Caracal	ngara		
Wildcat	Nkari		
Lion	Ngatunyi		
Leopard	Nolocho or Kilor		
Aardwolf	Mberwa (confused with Hyaena?)		
Hyaena, striped	Mbirwa		
" spotted	Mbiti ulu or Nkare		
Genet	Kiujuli or Muyuri		
Civet	Nthegerethe		
Warthog	Ngiri		
Bush Pig	Ngore ya Kithaka		
Hyrax	Ntekere or Imuru or Inyore		
Giraffe	Nchanyi		
Duiker	Nthia		
Oribi	Nthiramu		
Bush Buck	Kurungu		
Impala	Kimothoro (cf. Hartebeeste)		
Hartebeeste	Kimothoro (also Hunter's antelope) (3)		
Wildebeeste	Thirua (or Eland?)		
Grant's Gazelle	Nguuli		
Thomson's "	Thiramu (cf. Oribi)		
Waterbuck	Soro (4)		
Steinbok	Ncere or Nkunu		
Dikdik	Nthia (cf. Duiker)		
Eland	Nthirwa (cf. Wildebeeste)		

(1) Most informants insisted that this animal is called monkey in English....
(2) One informant gave this for Mangabey.
(3) One informant gave this for Impala
(4) The same informant gave this for Oryx
(5) One informant gave this for White-tailed Mongoose....

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TERRITORIALITY IN SUNBIRDS?

Sunbirds, Nectariniidae are technically Passeriformes, unlike New World Hummingbirds, which in ways they closely resemble in both feeding form and feeding habits. As passeriformes, they may be expected to have developed fairly strong territorial instincts and are often seen chasing one another away from certain blooming shrubs and other plants.

For several months a Superb Starling *Nectarinia superba* has been a constant visitor in our Uganda garden to a flowering shrub, Chinese Hat Plant *Holmskioldia*. It spends hours each day flying at a window, fluttering downward along it then flying back to a perch near the centre of the shrub. For months, there has hardly been an hour without this activity, from sunrise to shortly before dusk. The *Holmskioldia* usually is an attractant to sunbirds generally and particularly to several pairs of Mariqua Sunbirds *N. mariquensis*, and a pair of Green-headed Sunbirds *N. verticalis*. This latter sunbird has largely taken over the bush recently and the Mariquas seldom visit it any longer; however, the Superb Sunbird visits it at least a few hours daily, the attraction being the window and its own reflection and not the flowers, in which it is not interested. This window is a source of endless hours of interest to it.

Recently, it has been noticed that invariably when the Superb Sunbird makes it presence known in the bush, either by a short song or if it happens to be flying against the window, the Green-headed Sunbird puts in an appearance almost immediately, usually within a minute or less of the arrival of the Superb Sunbird. The Green-headed constantly flicks its wings in an excited fashion when it enters the bush, all the time making a loud double-noted chipping sound. It suddenly darts at the Superb Sunbird, one or two such short flights being enough to drive the Superb out of the bush. The Superb is then pursued and prevented from alighting in other bushes in the garden until it flies high up into a tall *Sapium* tree.

Regarding the peculiar habit of the Superb Sunbird, of flying at the window daily over such a long period - it is difficult to explain on the basis of territoriality. It never seems to tire of the activity, carrying it on for hours. It is sometimes gone for an hour or so only to return to the window and resume the same behaviour. It is doubtfully explained as aggressive action against a rival sunbird - its own reflection. It is more likely to be an attempt to penetrate what to it is the unknown (the interior of the house but reflected as part of the garden) and is a form of curiousity rather than aggression. At least, this is the way it appears to us. Finally, almost in sympathy for it, we opened the window to see whether it would fly inside. It sat for a while on one of the window security bars but never ventured into the house.

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JOURNAL OF THE EAST AFRICA NATURAL HISTORY SOCIETY AND NATIONAL MUSEUM

The following Journal part has been published and is now available to all interested members:
Vol.75 No.187 DIET OF THE BARN OWL IN NAIROBI, KENYA By Cecilia Gichuki.

BLACK-SHOULDERED KITE WITH A FRESHLY KILLED FISCAL SHRIKE IN MASAI MARA GAME RESERVE

At 0830 h on a Sunday morning, 16 August 1987 we were driving along a dry stream valley near the Talek River in the southern Mara. Perched on top of one of the bushes was a Black-shouldered Kite *Elanus caeruleus* holding a freshly killed Fiscal Shrike *Lanius collaris*. A few metres from it was another kite. I was informed that this pair of kites had just fledged two young ones (neither of which we could see). The kite holding the fiscal shrike began removing feathers from the latter. As it did so, another pair of fiscal shrikes advanced upon it and struck it in turns (I was informed that the fiscals had also fledged two young), the kite looked very undisturbed by the attacks.

Also present (but not attacking) was a pair of Three-streaked Tchagras *Tchagra jamesi* which moved excitedly below where the kite was perched. Normally, I understand, the Black-shouldered Kite's main food items comprise mice and rats and I wonder whether other people have seen them killing and eating other birds.

Any observations elsewhere ?

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'DRUMMING' BY SWIFTS

In the *Ibis* (1963. Vol.105: 566-567) I reported that a flock of Mottled Swifts *Apus aequatorialis* had made vibrating noises with their tails when diving upon a small dam some ten miles west of Nairobi on 27 April 1958.

Subsequently I learned that the dam's owner, the late Bill Woods, had also heard the noise on two or three later occasions.

The original notice of this appeared in the EANHS *Journal* (Vol.23: 8) in June 1958.

'Drumming' is a well known feature of the display of the Common Snipe *Gallinago gallinago* and the Lyre-tailed Honeyguide *Melichneutes robustus*.

I have just discovered that Smythies, in his *Birds of Burma* (1940, 1953), states that the Brown-throated Spine-tailed Swift *Chaetura gigantia* "... when swooping down to water a drumming sound of three or four beats is often heard, not unlike the drumming of a Snipe" (p.365).

This habit may well be more common than it would appear from publications and Members may know of further occurences in Kenya and elsewhere.

D.K. Bednall M.B.O.U., Moonfleet, Higher Ansty, Dorchester, Dorset DT2 7PU .

CROCODILES AND FISHING

During the last Christmas break, December 1986, we spent some days fishing on the east side of Lake Turkana. Nile Perch and Tiger Fish were feeding in relatively shallow water and we spent most of our time close to the shore. Crocodiles were abundant along the beaches and we constantly passed within 10 - 15 metres of them without incident. Occasionally we fished deeper water further offshore where we rarely saw crocs and those that we did see usually appeared to be swimming purposefully. On one of these trips we were trolling slowly about a kilometre out early in the morning when our boat appeared to run into a rock or log. The outboard engine stalled and kicked up and we noticed a crocodile swirling and sinking just behind the stern of our boat. It seemed likely that the croc was the cause of the collision. However, the lake was calm with good surface visibility and we had not seen any crocs that we could have accidentally driven into. We also thought it would be an extreme coincidence for an unsuspecting underwater croc to surface right into us. This left the alternative that the collision was not an accident, which, since the boat was a rubber inflatable, rather took the edge off an otherwise enjoyable morning.

We have read of crocs attacking small boats in northern Australia and would be interested to hear whether anyone has heard of or experienced similar incidents in East Africa. Could a slowly revolving propeller resemble an animal in distress? Certainly crocs do respond to signals such a splashing and one of us has twice been surprised on the Tana River by their arrival at his feet when landing catfish.

Whilst on the subject of crocs and fishing, we have seen photographs of crocodiles hooked on large plugs and baits used in northern Australia for Barramundi, a very close relative of Nile Perch. Does anyone know of crocodiles being caught on fishing tackle here? We have managed to avoid such a problem but did once see a green bush snake (presumed) at Naivasha dive out of papyrus and strike a bass plug accidently cast onto the beach below it. It repeatedly struck at several other casts but was not hooked, presumably because its mouth was too small and tough

Paul B. Rossiter, Box 32, Kikuyu and J.J. de Castro, Box 30772, Nairobi.

CONTRIBUTIONS TO THE *BULLETIN*

The *Bulletin* now appears once a quarter, four times a year, and contributions are always welcome on any subject of Natural History. Please send them in good time i.e. at the beginning of each quarter - January, April, July, October. Preferably typed or in clear handwriting.

As members are aware, Kenya adopted the metric system for weights and measures some years ago. Therefore it would be appreciated if contributors would please remember to convert such weights and measurements to metric notation when submitting their manuscripts. Incidently, it would save me quite a lot of time!

Editor.

PRISCILLA ALLEN - AN APPRECIATION

Priscilla Mary Allen was born in 1903 and passed away peacefully in Harrison House, Nairobi on 17 October 1987. Her end was as she had always wished it to be, an end without pain following a minor stroke.

Born of Missionary parents in China, Priscilla's life continued as it had started. Unusual, adventurous, eventful. She grabbed life with both hands; not one to be swept along with the tide, she had very definite strong views upon many aspects of life but nevertheless remained a seeker after truth and knowledge. She was a thinker and a philosopher; always modest about her talents. Never in question was her faith in God and her belief in the teachings of the Bible.

Armed with this faith, an Oxford degree in classics, a qualification as a professional Librarian and an interest in the welfare of mankind she spent some years doing social work in the East End of London. She joined her brother John and sister-in-law in Tanga, Tanganyika (as it was then known) to assist with her nephew's birth in 1931; travelling thereafter to Nairobi to work in the MacMillan Memorial Library. She was later joined here by her parents, Beatrice and Roland. Then came the war in 1939 and Priscilla's entry into the W.A.A.F. After some years as an officer in Egypt she rejoined her father in East Africa and found the ideal setting to pursue her love of Natural History and especially birds. Her subsequent career as a librarian was well suited to one whose idea of service was to help others. First at the Medical Research Library in Nairobi where her interest in medicine was expanded for Priscilla had wanted to be a doctor. No wonder her favourite reading matter, in later years, became the British Medical Journal to which she subscribed all her life. After retiring from the medical library in Nairobi she was invited to set up the Makerere University medical library in Uganda, a different and more lushly tropical country than Kenya which, to her delight provided a new set of birds to get to know. Thence to Ehiopia where she repeated the excercise in setting up yet another medical library at the Haille Selassie University in Addis Ababa. Weekends and holidays saw her setting off on her donkey, exploring the fascinating countryside, staying at wayside 'hotelis' and getting to know the people and the birds.

Her last job was with the library of the East Africa Natural History Society and National Museum where she was able to combine the job of librarian with that of Honoray Secretary of the Natural History Society. Visitors to the library found a kindly, helpful and erudite little person, very active despite a limp caused by the arthritis which was to afflict her so severely later. Most impressive was her sparkling brain, her intellect, her devotion to her job. Equally important she was fun, notwithstanding the fact that she had a sharp tongue when she thought in necessary. There was no hypocrisy in her and I am sure she was loved partly because of her moral integrity in this regard.

Not long after her arrival in Nairobi and pursuing mutual interests, a small and exclusive club was formed called "The Crows" so-named because we thought crows the most intelligent of bird groups. This consisted of four of us who seized every opportunity to go birding on safari; light-heartedly we gave each other latin crow names; but Priscilla objecting to *Corvus albus* (after her white hair) established her independance, as always, and insisted upon the shrike name *Corvinella*, a name she used frequently thereafter in signing off her written articles for the Natural History magazine.

In spite of advancing arthritis in the knees and constant pain - later alleviated by operations - Priscilla's courage remained indomitable; aside from members of her family overseas and her close friends, her work, safari and birds were paramount in her life. Memories bring back that time in a flooded landscape when five buffalo came up the path towards us; Priscilla stayed watching, she would *not* move. I did not share her conviction that no wild animal would ever harm her. I gathered her up and pushed her behind a bush where we peeked at the buffalo passing three metres from us.

To Priscilla, communing with nature meant a bed in the open with a mosquito net only for protection. This led to some curious situations at times. There was the night when it rained heavily and upon waking Priscilla emerged from her sleeping bag steaming like a Christmas pudding. There was that other occasion in Sokoke Forest when the campsite was besieged with safari ants; her net one mass of heaving movement with her sleeping peacefully inside. But perhaps the strangest sight was one full-moon night camped on a cliff above a sand river; in a compromise Priscilla had agreed to share the tent as long as she could have her bed by the opening with her head outside. Later that night came a squawk of surprise and there was Priscilla on her bed on all fours rubbing noses with a giraffe.

Not so happy a memory but again showing the invincible courage of this lady was when, drinking tea alone in her house one Sunday, she was attacked by a four man gang and left injured on the floor. Weeks and weeks of hospitalisation followed; a move to Harrison House was mooted but after consideration she returned to her home. Her attitude was that she had spent most of her life in Africa and this was the one and only bad incident, she was very lucky, she said. Reluctantly she yielded to pressure from her friends who insisted she had a padlocked gate at the entrance to her drive.

In the last few years failing eyesight meant she could not see the birds too well, not to be beaten, even now, she took delight in being with others who could point them out to her and she constructed bird feeders in her garden close up to her windows.

In spite of her devotion to natural history Priscilla also loved people and made it a point to meet somebody or to attend one of the many functions held in Nairobi - every day if she did not leave the house at least once she felt deprived, she said. Although not domesticated and not very interested in household tasks she, with the aid of her servant Macharia, entertained a lot. Perhaps one remembers most those Sunday buffet lunches which became an institution, in the garden of her house near Westlands and where she had gathered together the most interesting people. Some she met at the many Societies she joined. The East Africa Natural History Society, The East African Women's League, The Museum Society, The Astronomical Society and many others; her interests were wide and her friends many.

Frail, able to walk only with difficulty, Priscilla joined her great nephews and nieces in Delhi for a trip to Kashmir in August this year; there they spent three weeks on a houseboat. She had a *wonderful* time she said when showing me her pictures afterwards. This was to be her last trip - the last safari of a grand and rare person. It was a privilege to have been her friend. We mourn her passing.

Jean Hayes, Naivasha.

PRISCILLA ALLEN MEMORIAL

As members will know, donations to the EANHS instead of floral tributes were requested on the death of Priscilla. It is felt that perhaps the best memorial to her would the purchase of books for the Library. However, should any member wish to make alternative suggestions, they are requested to convey them to the Hon. Secretary, Box 44486, Nairobi.

YOUNG CUCKOO BEING FED BY COMMON BULBUL

On 8 March 1987, in my garden on Bandera Lane, Spring Valley, I was alerted by the loud alarm calling of a Common Bulbul. The calls reached a crescendo as I searched in the *Erythrinum* for young. A young Cuckoo flew out followed by the Bulbul. The Bulbul fed the Cuckoo with what looked like a small pale-green pea. I think the Cuckoo was rejecting this offering, as the Bulbul was having difficulty trying to push the 'delicacy' down its throat. This performance was seen in silhouette as I had no binoculars with me. I think the Bulbul eventually ate the offering itself, which was probably sticky, as it wiped its bill from side to side on the tree branch.

Later, with binoculars, I watched them again, the young Cuckoo was wing shivering and 'peeping' loudly. As I was viewing it from behind I could not see if it took the food offered when the Bulbul flew in again, but the Cuckoo then jabbed the Bulbul very sharply several times on the shoulder. Was this frustration at not receiving the desired food?

The Cuckoo had a blackish bill, it was emerald on the back with fine chestnut barring. The throat looked grey, but I eventually saw that it was very finely and delicately barred with black on white. There were two small white dots on either side of the head at beak level. There was no white on the wings. I think it was a young Klaas' Cuckoo. I did not see them again.

D. Brass, Box 59196, Nairobi

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LETTERS TO THE EDITOR

Dear Sir,

El Karama Ranch - Laikipia

My family and I visited El Karama (west of Nanyuki), over the weekend of 5 and 6 September and I would thoroughly recommend it to members as a very pleasant, relaxing and easily accessible - in dry weather particularly - place to visit.

Accommodation is in well-built spacious twin-bedded bandas and crockery, cutlery, bedding and other utensils are available for hire at a small extra charge. Bookings can be made through Let's Go Travel or direct to Mr & Mrs Guy Grant, El Karama Ranch, P.O. Box 172, Nanyuki. Tel Laikipia 34Y2.

Without looking very hard for birds I managed to notch up sixty five different species, including Bateleur Eagle, Kori Bustard, Slate-coloured Boubou, Cut-throat Finch, Grey-capped Warbler, Nubian Woodpecker, Striped Kingfisher, Yellow-spotted Petronia, Golden Pipit, Sulphur-breasted Bush Shrike, D'Arnaud's Barbet, Red-fronted Barbet, Rosy-patched Shrike amongst many others.

We also saw Reticulated Giraffe, Grevy's Zebra, Oryx and many other game animals. All in all a very enjoyable stay and to be recommended.

F.J. McCartney, Box 110, Kiambu.

Dear Sir,

The Olekesaile/Magadi Road area and particularly around Olekesaile Mountain contains an interesting variety of mammal species and numerous birds. In the past four years on numerous visits to the flood plains surrounding the mountain, the following have been noted: Lion and cubs, Cheetah, Eland, Bat-eared Fox, Ostrich, Giraffe, Warthog, Grant's Gazelle, Zebra, Impala, Kirk's Dik Dik and Gerenuk (the latter only about 6 km south of the base of the Ngong Hills!). Leopards are said to haunt the cliffs and peaks of Olekesaile itself. Among birds, an immature Great Spotted Cuckoo is of particular note, showing breeding in this area.

More sadly, Olekesaile contains the sole elephant (as far as is known) left in Kenya in the direction from Mt. Longonot to the Tanzania Border. I have named this sole male elephant, estimated to be 9 - 12 years old, 'Oliyio Maa' for 'The Lonely One'. Informants say that the last family was wiped out by poachers around 1976 and 'Oliyio' was spared as he was an infant. It is hoped that either a female can be taken to 'Oliyio' or he himself be darted and translocated. His plight is miserable and death awaits the moment his tusks are judged large enough for poaching.

I would be very interested to hear of, or receive natural history papers, notes and the results of any animal surveys of Olekesaile and the general Kwenia/Elangata Wuas area from any source.

Peter V. Giraudo, Box 15035, Nairobi.

REQUEST FOR INFORMATION ON INDIAN HOUSE CROW BEHAVIOUR

I am accummulating information on certain aspects of Indian House Crow *Corvus splendens* behaviour, namely, predation and harassment of other bird species or mammals by these crows. I would be very grateful to receive information of any observations on feeding, e.g. feeding strategies, types of food, food hoarding etc. in this connection, which should be sent to:

Dr C. Ryall, Box 88692, Mombasa.

SOCIETY NOTICES

The Society Office will close for the Christmas and New Year holidays from 14 December to 11 January 1988. Therefore there will be no Newsletter in December and the next issue will appear in late January, covering January/February.

Members are reminded that Dr Lester Short will lecture on "The Future of African Ornithology" on 11 January 1988 at 5.30 p.m. in the Ford Hall at the National Museum.

HON. TREASURER

The Hon. Treasurer, Dr Stephen Njuguna wishes to stand down at the next A.G.M., would any member who would be willing to take over please notify the Secretary, Box 44486, Nairobi. The person will be appointed to serve on the Executive Committee immediately so that an appropriate hand-over can be accomplished before the Annual General Meeting in April next year. Steve Njuguna has been the Hon. Treasurer for a number of years and now finds that his teaching commitments at Kenyatta University are such that he cannot devote as much time as he would wish to the Society's affairs. Kenyatta University College is quite a distance from the Museum and the Society office also. Quite a consideration.

So any member with experience of simple accounts is earnestly requested to volunteer for the office of Treasurer, which involves a few hours work a week.

HELP IN THE SOCIETY OFFICE

The perennial plea for help in the office with the mundane tasks of collating, wrapping and posting the Bulletin (once a quarter) and the Newsletter (once a month) is once more made. If *you* can spare a morning, an afternoon or an hour or two to help the Secretary, Mrs Lorna Depew, *please* give her a ring or call in to see her. Telephone. 742161 or 742131.

Thankyou very much.

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THOUGHTS ON A WEDNESDAY MORNING BIRD WALK!

The Little Swifts go racing by
Like winged thoughts across the sky.
They twist and turn with fluid grace
On weightless wings through endless space.

Earth-rooted, sadly, mighty man
Can only gaze at heaven's span;
No rapturous joy to fly as these,
He, lowly, worships on his knees.

D. Brass.

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COMPLIMENTS OF THE SEASON

May we wish all Members and friends a very Happy Christmas and prosperous New Year.

May we also suggest that you visit the Society Office where you may well find a suitable gift for your friends.

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HD: Bull

THE EAST AFRICA NATURAL HISTORY SOCIETY

Chairman: Prof. J.O. Kokwaro
Vice-Chairman: Mrs F. Ng'weno
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***Bulletin* Editor**: Mrs D. Backhurst.

Membership

This offers you free entry to the National Museum, Nairobi; free lectures, films, slide shows or discussions every month in Nairobi; field trips and camps led by experienced naturalists; free use of the Joint Society-National Museum Library (postal borrowing is possible); a copy of the EANHS Bulletin every four months and a copy of each Journal published during your period of membership. The Society organizes the ringing of birds in eastern Africa and welcomes new ringers. It also runs an active Nest Record Scheme. Membership rates are given at the foot of the page.

Journal

The Society publishes the Journal of the East Africa Natural History Society and National Museum. Each issue consists of one paper; sometimes two or more short papers may be combined to form one number. Several may be published during one year. Contributions, typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five copies of their article free, provided that these are ordered at the time the proofs are returned.

EANHS Bulletin

This is a duplicated magazine issued four times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (EANHS Bulletin), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

Scopus

The Ornithological Sub-Committe publishes this bird journal five times a year, cost KShs 100 per annum. All correspondence to D.A. Turner, Box 48019, Nairobi.

EANHS Membership subscription rates

	Local	*Overseas*
Institutional (schools, libraries), annual payment	KShs 100	US$25 or Stg £16
Full Local and Overseas: annual payment	KShs 100	US$11 or Stg £7
Student (full-time student including university undergraduates; no Journal supplied): annual payment	KShs 20	US$8 or Stg £5
Life membership	KShs 1500	US$144 or Stg £90

Subscriptions are due 1 January. From 1 July you may join for KShs 50 and receive publications from that date. Application forms for membership are obtainable from the Secretary, Box 44486, Nairobi.

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BULLETIN

A publication of the East African Natural History Society, Box 44486, Nairobi, Kenya. Price 10 shillings.

EANHS BULLETIN Volume 18 (1) FEBRUARY 1988

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A DAY SPENT WATCHING A NEST OF RED-BILLED HORNBILLS IN TSAVO NATIONAL PARK (EAST)

Dawn is just breaking and the sky is a deep orange-yellow, a beautiful spectacle which normally heralds the birth of a new day in Tsavo. Breaking the peace and quiet of dawn, the air is filled with familiar, harsh and characteristic calls of some common Tsavo birds.

With the first signs of dim light a solitary, medium sized bird, not uncommon in this region, is perched on a *Commiphora holtziana* tree, alert and waiting. Waiting to start yet another long day searching for, obtaining and bringing food to feed his mate and young who are safely 'imprisoned' in a hole in the tree-trunk below where he is perched.

His mate, who imprisoned herself nearly four weeks ago, is brooding four young, the eldest about a week old. She will remain with the young ones for some three more weeks. During this time, the male has to cater for all the dietary requirements of his 'family', and will continue (with a little assistance from the female when she emerges from the nest) for some four further weeks until all the young fledge. But the bird is determined! This is the male Red-billed Hornbill *Tockus erythrorhynchus*.

The early morning has barely brightened up before he turns his head from side to side, stretches his wings and prepares to fly off. His day has begun; he flies to perch on another tree some fifty metres away and rests momentarily before flying away again to land on a *Commiphora* tree which is at its peak fruiting stage. Here he picks a single fruit and flies back to the nest. Perching briefly, he then flies to the nest entrance and quickly presents the food. It is accepted immediately with a loud harsh acceptance call from his mate. This, plus the begging calls made by the young motivate him to work harder as he flies away.

The nest entrance is only about a metre from ground level and only 4 cm long by 2 cm wide. Two minutes have hardly passed, before he is back with more fruit. He presents it and is gone again. This continues for the next ten minutes or so. With time, the infant sun's rays gradually warm the surroundings and he becomes even more active, bringing in more fruit and a variety of arthropods comprising mainly crickets, grasshoppers, butterflies, millipedes and beetles. Having watched him for 2 hours, I calculate his rate of bringing food is nearly 50 times an hour.

He now brings a huge cricket which apparently cannot fit into the small entrance I focus him well through binoculars from where I am sitting (in a blind made of dried bushes which fortunately he has become used to and accepts) to see how he will go about such a big task.

Perched on the nest tree, he positions the cricket to have it by the tip of his beak. Then he flies to the nest entrance to present it. With continuous harsh calls, the female tries to pull it - too big! He next flies with it to a branch above the nest and manoeuvres the cricket back and forth in his beak before presenting it again - still too big! He repeats this manoeuvring act over and over again, this time detaching some limbs and decapitating it then presents it again. Just before the female grips it, the insect drops to the ground. He dives following it and intercepts it just before it hits the ground and back he goes to present it again. This time he makes it. He flies away to a nearby tree and starts 'cleaning' his beak by rubbing it against a branch to and fro, before flying further away.

Ten minutes pass by without him coming back. I become impatient and adjust and stretch, when I realise I have betrayed myself. All along during my stay in the blind in the past, I have been extremely careful not to move unnecessarily while in the blind, lest I am noticed by the notorious White-crowned Shrikes. These black and white birds are extremely nervous and continuously produce very harsh warning calls as they fly about near what they suspect to be 'undesirable' in their environment. This is it then, they are flying about over the shrubs which house my blind. This in turn attracts a horde of other noisy birds including the equally noisy Superb Starlings, the Square-tailed Drongos, Red-billed and Von der Decken's hornbills plus lots of other White-crowned Shrikes. 'Everybody' is apparently bothered about what is hiding in the blind. Eventually, after nearly ten minutes of continuous 'mobbing' by the multitude of nervous birds, there is only one thing to do - come out into the open! This works wonders! "Oh, it is only a human being" I almost hear one of them say when I reveal myself! I notice 'my' Red-billed male has also come to find out what is wrong in his territory. The birds soon disappear and I return into the blind.

I continue sitting in the blind watching this unbelievably hard-working bird as he comes and goes for another one and a half hours. This time he stays away for nearly twenty minutes before re-appearing; it is after mid-day when temperatures in Tsavo are normally very high. Another five minutes and still no sign of him. I start having strange imaginings about the fate of his family should he be killed by a predator, when I suddenly see him come with a large item, which I later identify as a dead gecko. He presents and perches nearby with raised wings and his mouth open. He then flies further away.

I have a break and come back to the blind two hours later, but just before I disappear into the blind he notices me. I am dressed in well camouflaged clothing and as soon as I settle in the blind and start focussing my glasses, he flies to the nest entrance, presents the food item and flies away.

Nearly five minutes later, I see a huge monitor lizard at the base of the tree on its way up. This I guess, presents no threat to the securely sealed Red-billed Hornbill family. As the reptile moves up, it goes past the nest entrance, straight up to what I later find is its home: a long cavity extending sideways into a dried branch of the tree. The male hornbill comes soon after with a big locust, presents it and goes away.

Shortly afterwards, a pair of Von der Decken's Hornbills perch on this tree where the nest is located. As if the male knows where the red-bill nest is, he flies to the nest entrance and perches as if to present food. The female quickly realises he is a strnager and responds with rapid pecking. He retreats, flies about and is back again at the entrance. There is more pecking and he flies 'unhappily' away.

The female (and later the young), sitting inside the nest have a good view with one eye through the peephole of the area directly in front of the entrance and she is ever ready to attack should any strange creature appear at the entrance. I have watched snakes, geckos, bush squirrels, other birds and even buzzing bees being attacked at this and other nests in the past. What the Von der Decken's male is up to in this case is not known. Was this hole once used by this pair for breeding? Or is it that the pair are just doing their routine check of suitable nest holes in which to breed?

Hornbills normally breed in the same nest hole year after year, but what would be expected if a pair comes round only to find that the tree where they normally nest is gone because an elephant has knocked it down, breaking or uprooting it?

It is now towards six o'clock and the male red-bill is still bringing in food before dusk sets in. With the female's role after emergence being small in assisting to bring food, the male has to work daily this way for up to 70 days for the whole breeding period! A really monumental task which has to be done!

His day is about to be over. With a rate of nearly 30 - 40 trips per hour this bird makes 360 - 480 trips per day. This perhaps is necessary for his task of feeding five individuals. Will the rate increase as the young mature? Suppose something happens and he is killed, would his mate break out the nest entrance and go looking for food to save herself and her young? Perhaps this would depend on her moulting stage, since at one point she loses most of her flight feathers and therefore cannot fly. Suppose the tree with the family is knocked down by an elephant perhaps killing the family what would he do? Would he still continue to defend the territory and try to pair with another female?

With so many other birds of the same species, different species of the same genus, other bird species, reptiles, mammals and insects using the same holes for various purposes and the fact that trees have generally been on the decline in Tsavo, is it possible that there could be a shortage of suitable cavities and therefore intra and interspecific competition?

As I head for home, and as the male red-bill, a proud and industrious worker, finally prepares to end his busy day, I still have all these questions to answer by further observations and research.

Oscar Wambuguh, Tsavo Research Station, Box 14, Voi.

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CROWNED EAGLE QUARTERING COLOBUS MONKEY

On 24 October 1987 near Chepnyalik cave in Mt. Elgon National Park we found a Crowned Eagle nest occupied by a pair; the birds were nesting.

On the next day at about 13.00 h we were driving along the track above Makingenyi cave when we encountered a large group of Colobus monkeys rushing about on the ground. Just around the bend of the track we came upon a Colobus monkey which had apparently just been killed by a Crowned Eagle. We were approaching the scene slowly. There were two birds; the smaller one, presumably the male, flew off when we were about 15 metres away and perched in the tree above. The other remained on the monkey, bracing it with half opened wings. We stopped about 6 metres away, the monkey was fully grown (according to Haltenroth and Diller, an adult weighes from 10 to 20 k). We were unable to determine its sex. It was lying on the track, half prone and half on its left side, being held by the neck in the talons of the eagle. Considerable amounts of blood, fresh and probably arterial, had stained the track. There were no other external injuries seen and the mode of killing was not possible to determine, except that there were no signs of a struggle around.

The eagle now started to pluck the hair around the right shoulder of the prey. It stood with both feet on the back of the monkey and tore at the hair with its beak, discarding the hair. When some of the tufts, sticky from blood remained adhering to the beak, the eagle cleaned its beak with its talon.

We decided to try and drive nearer; the bird flew off into the tree above. We positioned the car 3 metres abeam from the carcass and stopped the engine. The bird glided down to the ground about 5 metres from the carcass from where it walked with half opened wings and leapt onto its back. The other bird remained for a while in a nearby tree, but then left. For the next half hour we observed how the eagle proceeded to dissect its quarry. Throughout this time it was facing us but did not display in any way, and apart from looking at us from time to time, it did not seem to be bothered even when we talked. The flash of the camera (we only had film for two pictures left) did not distract it. It dissected the right shoulder and the right hind quarter alternately. First it plucked the hair in a line around the shoulder and then the buttock. Then it perforated the skin by tearing at it with its beak. After it had succeeded in perforating the skin, it continued with a semi-circular incision, removing the skin in a line. The bits of skin were discarded. Now it proceeded to deepen the incision through the muscle. It swallowed the meat in chunks, but feeding did not appear to be the main concern as it constantly extended the deepened incision. The eagle was working with the whole of its body: balancing, and tearing with considerable effort at the skin, muscle and ligaments and cleaning its beak. It was obviously tiring, yet still in haste.

We decided to leave it for a moment and drive to the nest (in a straight line, only about 2.5 k away) soon we met another car full of birdwatchers and directed them to the eagle. As it happened, in that car there was a professor of medicine who was later able to report that the eagle worked its way into the shoulder and hip joints. From killing the monkey to opening these two joints, an hour had elapsed. We found the nest empty (whether there were eaglets in it we could not say).

Leaving the bird even for a short while proved to be a mistake: there came a heavy downpour and the tracks on Mt. Elgon can become temporarily unmotorable very quickly.

We managed to slither back to the scene of the kill just before 16.00 h. The birds had gone and so had the carcass. The ground was wet and there were no tracks visible. The carcass must have been removed before the end of the rain. Whether the birds managed to quarter it and cache it or whether they were robbed by a leopard, we do not know.

Driving back to the nest yet again, we were able to ascertain that the eagles had had some success: both birds were sitting on the nest and next to them was a large piece of a colobus monkey carcass. Of course, this may have been another pair of Crowned Eagles with part of another Colobus monkey?!

Imre Loefler, Box 47964, Nairobi.

WILD DOG SIGHTING

On 16 September, 1987 at about 18.00 h, two Wild Dogs were sighted at the Northern end of the Ngong Hills, on the first shoulder, level with the plaque laid by the President which commemorates planting of the first trees of the Ngong Hills Forest Reserve. This area is short grass, with a few immature trees at an altitude of about 2 250 m. The dogs were close to the track which leads up to the Radar stations, and were clearly visible for about five min., before moving off north west down the hills towards the plains.

We were in a Land Rover and on our way to walk along the hills. Our own domestic dogs expressed great interest in these alien animals, but were not allowed to get out and investigate!

Ray & Doreen Meynink, Box 24845, Nairobi.

ABERRANT SUNBIRD BEHAVIOUR

Those who read in the November *Bulletin* Vol.17 (4) the article by J & J Goodman on a Superb Sunbird fighting it's image in a window may be interested to hear of my experience with a male Variable Sunbird *Nectarinia venusta*.

He started coming into my bedroom about five months ago, perching on top of a long mirror and sometimes looking at himself upside down. Then the pecking and fluttering up and down, as described by the Goodmans, started and he soon found my three-sided dressing table mirror. The pecking in one or the other became almost continual and one wondered how he had time to eat. I consequently draped both mirrors, but he soon found the one in the spare room which he attacked, chattering the while. The window of this room is next to the verandah and I have frequently watched him going in and out, sometimes accompanied by another male Variable Sunbird which he seemed to be encouraging, with much chattering and fluttering to and fro, to enter the room with him.

At present I have a guest staying and one day as he sat at the dressing table the sunbird flew in to the mirror. He held out his finger and the bird perched on it! When not in use that mirror is turned face down which still leaves the bathroom wall mirror for him to hammer at. But he cannot long keep out of my bedroom and, frustrated it seemed by not being able to see himself, he took to pecking furiously and intermittently throughout the day, on the outside of the window. Every now and then he will fly in and right round the room sometimes perching, never taking alarm or having difficulty in getting out even when the venetian blind is down. Many times I have been woken in the early morning by this sunbird hammering away on the window or fluttering over my head.

Now, after about five months, he has stopped pecking at the window, but still fights himself - if that is what he is doing - in any available mirror.

I have no original explanation for this behaviour. It would not seem to be territorial since this sunbird alternates between two bedrooms and two bath rooms. It is a great joy to see such a beautiful little bird at close quarters and I should miss him were he to desist from his curious habits.

D. M. Sheppard, Box 24630, Karen, Nairobi.

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RED-FACED CRIMSON-WING ON MOUNT ELGON?

On 25 October, 1987 at about 11.00 h we were walking from the car to Kitum cave when, along the path in undergrowth, we noticed a pair of Crimson-wings. They were, in Crimson-wing fashion, in the shade a few centimetres off the ground apparently searching for food in the grass near the stream. Thinking that they were the Abyssinian Crimson-wing, we walked on and encountered another group of some 4 or 5, two of which clearly had a red face patch. We were only about four metres away from them at one point and saw the faces well and for a long time and repeatedly.

Clytospiza reichenovii is not recorded anywhere in Kenya (Britton 1980; Mackworth-Praed & Grant 1960). The nearest localities to Mt. Elgon where it occurs are the Ruwenzoris and the Crater Highlands of Tanzania. My questions are: a) Which Crimson-wing have we mistaken for the red-faced species? b) Does the Abyssinian ever have red on the face? c) Has anyone seen a Crimson-wing with a red face patch on Mt. Elgon?

Imre Loefler, Box 47964, Nairobi.

PYTHON SWALLOWING BIRD

On 25 November, 1987 in the late morning at Leopard Rock Lodge in Meru National Park, our attention was drawn by an attendant to a snake.

About 30 m behind the office building, there was a young rock python in the process of swallowing a bird. The python was about 40 cm long. It laid on a barren patch of ground. By the time I arrived on the scene, the prey had been almost swallowed; only one foot (?reddish) and some very long black tail feathers were still protruding between the snake's lips. I thought the bird may have been a Pin-tailed Wydah. It took the snake some further 5 - 7 minutes to ingest the tail, by which time the body of the bird had passed three quarters of the length of the snake's body.

At this time, the pythonette departed and disappeared under a heap of stones nearby. Although there were very few Pin-tailed Wydahs in the park and none were sighted around the python, I strongly suspect that that bird was the unfortunate prey.

Imre Loefler, Box 47964, Nairobi.

LETTERS TO THE EDITOR

Dear Sir,

TROUT IN KENYA

The interesting article by Rupert Watson on Trout in Kenya in the November *Bulletin* (Vol. 17 (4).) does raise an interesting point about who first introduced trout into Kenya.

I know that it is generally accepted that Grogan did so, and this is stated on page 22 of *Angling in East Africa* by Hately and Copley which is one of Mr Watson's references.

Nevertheless, above this passage on the same page the authors state: "This section of the book has given more trouble than any of the others. Definite written evidence is scarce. Oral evidence is rather - shall we say? - conflicting, but we have done our best and hope that every reader will help us find more facts of the early history for the next edition".

Sadly I know of no next edition, but the copy of the book which was recently given to me contained a cutting. This is of a letter in a publication called *East Africa* but unfortunately there is nothing which dates it, the only clue being that it refers to a review of *Angling in East Africa* which appeared on 8 December, the year not being stated.

In the letter Mr W.J. Monson then residing in Alassio, Italy states that the originator of the scheme to introduce trout was Mr S.L. Hinde, Provincial Commissioner. The rest of the letter is worth quoting:

"Mr Hinde, a keen and experienced fisherman, had studied the rivers of the Aberdare Range and their temperatures and became convinced that trout would do well in them. Accordingly - entirely on his own initiative and at his own expense - he purchased a consignment of brown and rainbow trout ova from Lord Denbigh's fisheries... These were met on his behalf by Mr Hugh Elder, who rushed them up to the headwaters of the Gura and Nyeri Rivers and established them there. They prospered, and when it was seen that the experiment was likely to prove a success, Major Grogan assisted it by purchasing further supplies of ova and engaging a man to look after them. But it was Mr Hinde's original idea, and his was the experience, both local and general, which enabled the fish to be acclimatised. He was constantly seeing and advising Major Grogan's custodian and his ova of the first consignment had grown into sizable fish before the later arrivals had passed the first stages of their existence.

Hoping that you will publish this letter, and that the authors of *Angling in East Africa* will make the necessary alterations in subsequent editions".

Nothing in this of course detracts from Grogan's role or from this thought for the country

P. Le Pelley, Box 30333, Nairobi.

Dear Sir,

I congratulate you on your issue Volume 17 (4) of November 1987 for it contained articles of wide appeal. I particularly congratulate Rupert Watson on his most excellent and interesting article on trout.

Arising out of this issue of the *Bulletin* I submit the following observations:

CAPE CLAWLESS OTTER *Aonyx capensis*. In 1957/58 when stationed at Thomsons Falls I used frequently to visit a British farmer who kindly allowed me to fish his stretch of the Melawa River in Ol Kalou. He had much trouble with a pair of clawless otter which at night raided the outhouses in which he kept his geese. No matter how much he tried to strengthen the wire of this outhouse the otters tore it away. Finally, after losing several full grown geese he had to his great regret to shoot them both one night in the goose house.

Another observation on the clawless otter: many years ago I was alone fishing the lower reaches of the Timau River. On the side of the river below the bank and just above the waterline I came on a large male clawless otter so freshly dead that rigor mortis had not quite set in. It appeared in excellent condition with no wounds. After a long and careful examination I found what I took to be the fang marks of a snake in the upper side of its neck. I went up on the bank above and there in the grass was a beaten out circle. I concluded, but this can only be surmise, that the otter had been attempting to do a 'riki-tiki-tavi' attack on a large snake, possibly a cobra, and had come out the loser.

HEDGEHOGS *Erinaceus frontalis*. Since 1964 I have lived on a 2.5 h plot on the corner of Ndege and Kwarara roads in Karen. In my first few years hedgehogs were plentiful and my Dobermanns would, on their late night walks, often bring one in and deposit it unharmed on the verandah. Then disease hit them and they virtually died out.

Latterly however, they have come back in numbers. But sadly I now have a young male Dobermann who when on his night walk catches and mauls hedgehogs so that they are either killed or I have to kill them. From April to November 1987 he caught and maimed or killed 14 hedgehogs. Since his last attack I have observed two other live and unharmed hedgehogs, an adult and an immature.

These hedgehog have always lived only in a small wooded part of the garden in which I leave tangles of long grass in which they rest and hide by day.

I submit this comment as the number of hedgehogs in this one small area has been a surprise to me. I only hope that as my dog matures he will cease to maul them.

CROCODILES ATTACKING BOATS. On page 50 of this issue in the article on "Crocodiles and Fishing", Paul Rossiter asks for reports of crocodiles attacking boats. I witnessed such an incident on the southern half of Lake Rukwa in 1947. Crocodiles lived in Lake Rukwa in very great numbers. Up to 1942 these were probably the most inoffensive crocodiles in Africa. Most indigenous fishermen fished for Tilapia waist deep in the water scooping the fish out in front of them in a net fixed between two poles crossed like scissors of about three metres in length. No one was ever attacked. One could shoot a duck and the guide would swim fearlessly out to retrieve it while a croc came from the opposite direction. They would arrive at the duck together and the guide would simply push the crocodile's head aside and bring back the duck.

In 1942 a disease attacked the Rukwa crocodiles and many died. Though never positively proved the later investigation suggested anthrax as the responsible factor. But whatever the disease was it totally changed the good nature of these crocodiles to vicious, dangerous animals and great care had to be exercised getting in and out of canoes.

One evening I was out on the lake. We were three medium sized dugout canoes - i.e. four paddlers each, paddling slowly and gently. I was sitting on the raised stern of the left hand canoe while the splendid old chief was sitting on the stern of the middle canoe twenty metres to my right. I was talking to the chief and so looking at the canoe. Suddenly on my side of the chief's canoe a crocodile of about 5 metres surfaced and slammed the stern of the canoe with his tail. It made a tremendous thump. I have no doubt that the attack was designed to sweep the chief off the back of the canoe and into the lake.

Eric Risley, Box 24751, Nairobi.

Dear Sir,

I should be most interested and grateful if any member could throw any light on the following observations.

Two weeks ago a sub adult male Eland in very poor condition died near a track in the northern part of this sanctuary. I saw it very soon after it was dead and presumed it to be another victim of the very severe drought from which we are suffering. The next morning Nubian, Ruppell's and White-backed Vultures were perched on the body and all nearby trees. To my surprise when I passed the carcass the next day, it was quite intact and untouched and no vultures were in sight. It remained untouched by vultures or hyaena for the next six days. On the seventh day, when I passed it, a large flock of from 40 to 60 Red-billed Hornbills rose from it. In total astonishment I asked my tracker if hornbills eat eland and he replied that they were eating the maggots from it. Is it usual for Red-billed Hornbills to go in flocks? I never remember seeing them other than in pairs before.

The next episode occurred the same day while I was in my office, I heard a series of squeaks and looked up to see a male Von der Decken's Hornbill with a fairly large toad in its bill. He banged the unfortunate creature on a branch several times and made a number of unsuccessful attempts to swallow it. He then sat on a branch a few metres from the window facing me and for the next 30 minutes worked on the toad by moving his lower mandible from side to side, thus slowly reducing the toad to a pulpy bag. After 30 minutes, the toad was barely recognisable as such, and with a huge effort the bird swallowed it. I had no idea either that a hornbill would tackle anything so large or that it was capable of moving the lower mandible sideways. Any comments?

Anna H. Merz, Ngare Sergoi Rhino Sanctuary, c/o Lewa Downs Private Bag, Isiolo.

DOWN AT DIANI - OCTOBER 1987

The beautiful windswept, sun bathed sea shores no less than the cool shaded forest floors and clearings hold exciting prospects for those of us who visit the coast only once a year. Both have rewarded us again this year with birds we have never seen before and others only rarely seen in many hours of bird watching.

On the beach just now are Bar-tailed Godwit *Limosa lapponica* back from breeding in the very far north; but the first ever sight of the familiar Oyster Catcher *Haematopus ostralegus* in dark brown plumage with dark tip to the bill was a particular thrill, recalling much less comfortable bird watching days on the coasts of Scotland.

Further south towards Galu village, a large predator sat very upright on a palm frond looking out to sea. A Peregrine *Falco peregrinus* without doubt, but one that would not allow us to approach near enough to be absolutely sure it was not our local bird. After two attempts to approach had been foiled, he set off seawards, dropped sharply to wave top level and accelerating to pursue, if a little half heartedly, three waders who made good their escape without difficulty. A moment later we saw the unmistakable and almost sinister shape of a Tropic Bird *Phaethon* sp. high up and very distant, who also descended to sea level in a magnificent dive resembling a predator's stoop but was too far distant to identify or to determine the purpose of the dive.

Even as late as 5 October one of the Grey Plover *Pluvialis squatarola* was still in striking summer plumage. What a wonderful sight these waders must be in their breeding areas!

Though casual impressions are often very misleading, nevertheless there does seem to be a paucity of Palm Swifts *Cypsiurus parvus* in the seashore coconut plantations this year. This was confirmed by my friend Omari Mohammed who ought to know since he climbs every tree in the neighbourhood collecting his "palm wine". Could the steady increase in Indian House Crows *Corvus splendens* be in any way connected?

Which ominous thought brings us to the Diani Forest, which though grievously cut about now, nevertheless still yields rewards to the patient watcher. A loud regular almost mammalian "Chok Chok" like a squirrel but reminiscent also of the Tropical Boubou *Laniarius ferrugineus* attracted us into a glade where we waited for a while, in fact looking for Narina's Trogon *Apaloderma narina*. After some 20 minutes the "Chok Chok" started again in the same area. We ignored it till suddenly a synchronised flicking of a tail caught our eyes. We were more than ever sure that it was a squirrel's tail and would have turned away had not our *bird* come along the branch into full view - a Nicator *Nicator chloris*. This is a new bird to us in this forest. It was followed almost at once by the silent arrival of Narina's Trogon.

On the way out of the forest, a chittering from some dry twigs and a quick short flight betrayed the presence of the wholly delightful Ashy Flycatcher *Muscicapa caerulescens* seen only once before.

The next day, keen to see the Nicator again we returned to the same place, but were not successful. However, on the third day in exactly the same manner and place, he showed up and gave us all a splendid view of himself and called at the same time.

This further convinces us that many birds do have fairly regular itineraries and that if one is patient, they may come back again to the same spot.

On another evening, for old times sake, we checked the track leading past the Baobab Hotel staff quarters - where we had first seen the Spotted Ground

Thrush *Turdus fischeri* several years ago - and to our delight - quite unpertubed by any people passing a few yards away, there he was again exploring the leaf debris on the forest floor. We have subsequently seen him several more times.

Our final forest floor finding on this visit was the result of sitting near a small fresh water leak in a pipe-line. In previous years we have noted Red-capped Robin Chats *Cossypha natalensis* coming into the open to bathe in the gloaming. This was repeated and we obtained good sightings, but when a small seed-eater turned up very late, we were not able to be certain but believe it to have been a Twinspot *Mandingoa* sp. probably the Green-backed Twinspot *M. nitidula*.

What a lot we owe to Leslie Brown's urging to sit and let the birds come to us rather than walk about looking for them. This is particularly true of forest and dense bush.

Geoffrey & Dorothy Irvine, Box 30690, Nairobi.

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THE USUAL CROW DEBACLE

Having watched a male Golden Palm Weaver build four nest in succession in a small tree outside our bedroom window and destroy each in turn because there appeared to be no female available to accept his proposals, I declared war on the Indian House Crows who visit our garden at Mtwapa.

My son's airgun being the only available weapon I soon learnt that it is not really adequate, once one has become long-sighted. Either one wears one's glasses and can see the sights, or one does not and can see the bird.

A few days spent with the airgun were wasted learning by bitter experience that House Crows recognise individuals, not only colour of skin, they differentiate voices, know the difference between a stick and a gun, perceive the slightest twitch of a curtain and tell each other immediately if a curtain never drawn before suddenly is closed for an hour. On the other hand, I can also understand what they are saying: "Sucks to her, sucks to her", "safe today, safe today", "food is different, don't touch it", "bad woman, bad woman", "now that looks good - stick around"!

Having had no success, I started potting wildly one afternoon, shooting at one and all from an upstairs window which the crows pass en route to the fish offal left regularly on the next beach at certain tides by the fishermen, but with no result.

In desperation I went that evening to see a 'crow-informed' friend. He kindly gave me a sleep-inducing powder and instructed me to spend a week or so introducing the crows to little mincemeat balls before finally rolling them in the fatal powder, which puts them almost instantaneously to sleep when they can be destroyed.

I came home feeling that I had at last gained the upper hand. But - next morning, there were only five crows to be seen, instead of the usual thirteen or fourteen. I suppose this was because I had managed to shoot two the previous day without actually killing them. With an airgun one must get them through the head.

Well, I put out some meat balls, but the remaining five birds were immediately suspicious to see red blobs amongst the usual posho, and for the first time the food was not touched.

After three days they started to feed again and I carried on for a week, then finally one morning, when all five crows were there (WHERE were the other 8 or 9?), I added the powder. As they came down to feed, some very noisy friends burst through the door and the crows were gone.

Next day I had to go for a while to Nairobi; on my return I started all over again. Still only five crows around enjoying the harmless and delicious meatballs. Christmas was now approaching with a lot of child visitors, who I felt would not enjoy crow murder, so after a few days I brought out the powder again. Crows must be psychic, for precisely one crow turned up that morning, something that has happened neither before nor since.

The solitary crow eat the doctored meat and duly fell asleep and was quickly dispatched. Someone had told me to hang up any corpses in warning to others, this had an unexpected effect. In the afternoon about sixteen crows materialised and held a good old Irish wake - and they are still around, crowing over me tauntingly after a, to them, successful six weeks' feud

Oh for the shotgun, which is in Europe, no longer licenced for Kenya.

Catherine Loehr, Box 95710, Mombasa.

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A SAFARI TO WESTERN KENYA

During the first week of January this year, my husband and I set out on a trip to Western Kenya - to an area we had long wanted to visit - Elgon, Saiwa Swamp, Kongelai Escarpment, the Sand and Suam Rivers and the Marich Pass.

Our main purpose for the trip was "birding" but the safari was worth it just for the truly magnificent and varied scenery - from the lush montane forests of Elgon to the dry scrub country at the Suam and the mountain scenery in the Marich Pass.

The roads, apart from the Eldoret - Kitale section are all good of their type. From Kitale through the Marich is excellent new tarmac, down the Kongelai to the Sand and Suam rivers is a sand/gravel road in good condition and the only problem area would have been Mt. Elgon had it been wet. We had a 4-wheel drive vehicle, and whilst this is advisable it would only be really necessary for the Elgon Park if there is rain or even the possibility of it.

We used the Saiwa Swamp area as our base and did three day length trips, taking with us each day a local guide Maurice Sinyereri (whom we had booked well in advance). Maurice added tremendously to our enjoyment of these trips, he knows the district like the back of his hand which means we never had to worry about which road to take. He has a great knowledge of birds and their calls having been taught by the late Tim Barnley. Maurice's ability to identify bird calls then imitate them to call up the birds meant we got sight of many more species. I am not sure if "bird Twitchers" count this as cheating but it certainly adds to one's bird list.

The first days' safari was to Mt. Elgon. We took the trip very easily - there had been rain the day before but the road had dried up and we had no problems. We visited the Kipkum Caves, and then found a pretty waterfall about 1 km further along the track and had our picnic watching a troupe of 30+ Colobus monkey. Some were so unafraid they came down to the waterfall to drink.

Our bird list for the park was extensive but I suppose the highlights were a pair of Doherty's Bush Shrikes, Brown-capped Weavers, Yellow-billed and Grey-throated Barbets and the White-headed Wood Hoopoes.

Our second days safari was the longest and most tiring as it was down the 1368 m drop of the Kongelai escarpment, where the views are superb, into the hotter drier country to the Sand River just before Kongelai village. We stopped at the base of the escarpment and had a walk in the bush by the road and were lucky enough to catch the briefest glimpse of Patas Monkey, and find amongst many other birds Yellow-billed Shrike, Curly-crested Helmet Shrike, Chestnut-crowned Sparrow Weaver and a pair of Silverbirds which were breeding in an old nest of some sparrow weavers. At Sand River we saw White-crested Turaco, Rufous Chatterer and the Black-headed Gonelek. Then came the only disappointment of the trip. We had planned to go into Kongelai village and turn west along the Suam River for about 5 km to have our picnic and do some birding, but the road in the village was being re-graded and it was just impossible to take it and so reach our turnoff and there was no alternative route. Again Maurice the guide was with us and it was on this trip that his knowledge of the roads in the area was invaluable - on our own I am sure we would have ended up in Uganda.

The final safari was a very easy one - we took the new good tarmac road and did a "motorised amble" through the Marich Pass. You can still see parts of the old road - what a trip it must have been on that! On our return we took the turnoff up to Kaibibich (which is just a few km before Kapenguria) and drove up a well graded but very steep road to where there is a good viewpoint - and one is rewarded by superb views out to the east over the Cheranganis and down into the dry country.

During our time in the area we also found time to make a number of trips into the Saiwa Swamp National Park, and on one of these were rewarded by the sight of a dozen Sitatunga. The Park is small and well served by footpaths, viewing towers and walkways out, into and over the swamp itself, and it is such a change and a pleasure to be able to walk and not to have to stay in one's vehicle. Our bird list here was very long, but top of it must come the Grey-winged Ground Robin, Luhder's bush Shrike, Grey-rumped Swallow, Double-toothed Barbet and the Eastern Grey Plantain Eater; but for sheer beauty, the first must be the white form of the Paradise Flycatcher which flies like a ghost through the trees.

The above hardly scratches the surface of all that we did and saw, but I hope it may have whetted the appetites of some of the EANHS members to want to go to this area and see it for themselves - it has something for everybody scenery, flora and fauna. If anyone is interested and would like details of where to stay, how to contact the guide etc. please telephone me at Nairobi 582213 or write.

Mary Sinclair, Box 30158, Nairobi

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HON. TREASURER

Members are reminded that our Hon. Treasurer Dr Stephen Njuguna is standing down at the A.G.M. Would any member with experience of accountancy *PLEASE* stand for nomination at the A.G.M. which will be held on 9 May 1988.

As stated in the last issue this office is not an onerous one and involves only a few hours work a week.

EANHS EXCURSION TO TWO CONTRASTING HABITATS IN KIAMBU

24 JANUARY 1988

1. TUINGANGA ESTATE Altitude 2100 m.

We are grateful to the McCartneys for their hospitality to their garden and estate. The site visited was a reservoir with adjacent base-rich marsh. An African Black Duck was of interest and the following plant list was made (excluding sedges and grasses). The list is in alphabetical order.

Aspilia pluriseta; Aeschynomene schimperi

Blumea perottetiana

Cassia kirkii; Crassocephalum sarcobasis; C. vittelinum

Dichondra repens; Drymaria cordata

Euphorbia schimperana

Floscopa rivularis

Hydrocotyle mannii

Lactuca capensis; Lobelia holstii

Phyllanthus odontadenius; Pentas lanceolata; Pentanisia foetida;
Platostoma africana; Polygonum salicifolium; P. senegalense

Richardia brasiliense; Rumex abyssinicus

Spilanthes mauritiana; Sonchus stenophyllus; Stephania abyssinica

A number of these plants were of interest. The Sow Thistle *Sonchus* is uncommonly collected, and there was a *Borreria* (unlisted) which we could not name.

2. KISIRANA ESTATE Altitude 2400 m.

We are grateful to Mr Gordon for access to a scrap of woodland in a dingle. There were tree ferns and the wild banana, showing the potential of the site, but the forest had been much disturbed. Nevertheless a good list of plants was obtained.

Arisaema milbraedii

Bothriocline furca

Conyza bonariensis; C. hochstetteri; C. steudelii;
Crassocephalum montuosum; Crassula granvikii

Drymaria cordata

Ensete ventricosum

Helichrysum cymosum; H. foetidum; H. odoratissimum

Impatiens hoenelii; I. rubromaculata

Lobelia gibberoa

Monopsis stellarioides; Mussaenda odorata

Parochetus communis; Pentas lanceolata; P. longiflora; Pycnostachts - Sp.
Plectranthus sylvestris

Sonchus luxurians; Senecio deltoideus

Rubia cordifolia

Tragiella natalensis

Veronica lasiopus; V. galamensis; V. jugalis

Of these the *Pycnostachys* is interesting, with white flowers and spiny fruiting calyx. The key to the species in *Upland Kenya Wild Flowers* is inadequate and will be rewritten.

In summary, this was a very interesting day, yielding material and comments which will materially help us in the production of the second edition of *Upland Kenya Wild Flowers*.

A. D. Q. Agnew, University College of Wales, Aberystwyth, Dyfed SY23 3DA.

SOCIETY LECTURE ON THE FUTURE OF AFRICAN ORNITHOLOGY

On 11 January Dr Lester Short of the American Museum of Natural History spoke on the future of African Ornithology. He highlighted various ways in which amateur and professional ornithologists can contribute importantly to our understanding of birds, and illustrated his points with a number of slides.

He also discussed the forthcoming Seventh Pan-African Ornithological Congress which is to be held in Nairobi from 28 August to 5 September 1988 and its importance for Kenyans and Africans in general who are interested in birds.

IMPORTANT NOTICE : ANNUAL GENERAL MEETING

The Annual General Meeting of the Society will be held on Monday 9 May 1988 in the Ford Foundation Hall of the National Museum, Nairobi.

Nominations for Office Bearers and Members of the Executive Committee as well as notices of matters to be included in the Agenda should be sent to the Secretary, Box 44486, Nairobi to reach her before 15 April.

Members who are prepared to serve on the Committee, either as nominated or co-opted members, are requested to inform the Secretary without delay; anyone willing to volunteer will be most welcome. Please mark the notice regarding the Hon. Treasurership on page 12 of this issue.

PRISCILLA ALLEN MEMORIAL FUND

As mentioned in the last issue a Memorial Fund has been opened to be used to purchase books for the EANHS Library in remembrance of Priscilla who did so much for the Society over the years both as our Librarian and also as our enthusiastic Secretary. Donations should be sent to the Secretary, Box 44486, Nairobi, and will be acknowledged.

HD: Bull

THE EAST AFRICA NATURAL HISTORY SOCIETY

Chairman: Prof. J.O. Kokwaro
Vice-Chairman: Mrs F. Ng'weno
Joint Editors of the *Journal of the East Africa Natural History Society and National Museum* Drs H.J. Beentje and J.J. Hebrard
Hon. Secretary: Mrs M.A. Muga
Hon. Treasurer: Dr S.G. Njuguna
Hon. Librarian: Miss R.M. Osborn
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Nest Record Scheme Organizer: Dr W.J. Karanja
***Bulletin* Editor**: Mrs D. Backhurst.

Membership

This offers you free entry to the National Museum, Nairobi; free lectures, films, slide shows or discussions every month in Nairobi; field trips and camps led by experienced naturalists; free use of the Joint Society-National Museum Library (postal borrowing is possible); a copy of the EANHS Bulletin every four months and a copy of each Journal published during your period of membership. The Society organizes the ringing of birds in eastern Africa and welcomes new ringers. It also runs an active Nest Record Scheme. Membership rates are given at the foot of the page.

Journal

The Society publishes the Journal of the East Africa Natural History Society and National Museum. Each issue consists of one paper; sometimes two or more short papers may be combined to form one number. Several may be published during one year. Contributions, typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five copies of their article free, provided that these are ordered at the time the proofs are returned.

EANHS Bulletin

This is a duplicated magazine issued four times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (EANHS Bulletin), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

Scopus

The Ornithological Sub-Committe publishes this bird journal five times a year, cost KShs 100 per annum. All correspondence to D.A. Turner, Box 48019, Nairobi.

EANHS Membership subscription rates

	Local	*Overseas*
Institutional (schools, libraries), annual payment	KShs 100	US$25 or Stg £16
Full Local and Overseas: annual payment	KShs 100	US$11 or Stg £7
Student (full-time student including university undergraduates; no Journal supplied): annual payment	KShs 20	US$8 or Stg £5
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Subscriptions are due 1 January. From 1 July you may join for KShs 50 and receive publications from that date. Application forms for membership are obtainable from the Secretary, Box 44486, Nairobi.

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EANHS
BULLETIN

A publication of the East African Natural History Society, Box 44486, Nairobi, Kenya. Price 10 shillings.

EANHS BULLETIN Volume 18 (2) MAY 1988

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CHAIRMAN'S REPORT FOR 1987 - JOHN KOKWARO

Once again, it is my great pleasure to welcome all of you to our 78th Annual General Meeting and to report on the management of the Society's affairs throughout the year. The year started fairly promisingly with the appointment of Mrs M. Muga as Acting Honorary Secretary. She apparently worked well, putting in longer hours than those stipulated; so that Members who had worked with her before the last AGM did not hesitate to recommend her for election as the Hon. Secretary. However, soon after the last AGM the Hon Treasurer brought to my attention some financial discrepancies attributable to the recently elected Hon. Secretary. It became apparent that she had continually been "borrowing" money from the Society funds. She also borrowed from many Members of this Society, the Museum Society and Museum staff, various sums of money under one pretext or another. Most of us in the Executive Committeee later realised that we were dealing with a fairly shrewd 'conwoman'. Mrs Martina Muga admitted having "borrowed" Society money and agreed to pay it back as from August last year, but up to now we have received nothing from her so her services were terminated during September 1987. The Executive Committee gave her a deadline of April 1988 to repay her debt, but again no money has been refunded. Legal advice has been sought from a Society friend, and efforts are still being made to recover the lost money. The alternative will be to charge her with theft in a law court. The recorded amount of money embezzled by Mrs Muga is reflected in the audited Society accounts tabled at the AGM. In view of this recurrent problem involving previously elected Hon. Secretaries of the Society, it has been suggested that some form of legally binding document be designed to be signed by future holders of the office of Hon. Secretary to the EANHS.

FUNCTIONS: The following Society activities went smoothly throughout the year: The most popular and regularly well attended activity continued to be the weekly Wednesday morning bird walks led by our Vice Chairman, Mrs Fleur Ng'weno. The monthly Sunday morning 'pot luck' excursions continued with good attendances. Our thanks to Mrs Ng'weno for her dedicated efforts in organising these functions.

Under the able leadership of our Functions Organizer, Mrs Dorrie Brass, the monthly evening lectures went on very well despite the fact that a few of them were poorly attended. There were also several well attended camping trips, and our thanks go to Mrs Brass for her efforts in organizing these activities throughout the year.

PUBLICATIONS: The following three parts of the *Journal* were published:

Vol.75 No.187. Gichuki, C.M. The diet of the Barn Owl in Nairobi, Kenya.

Vol.76 No.189. Tarras-Wahlberg, N. Observations on Salvinia and its environment at Lake Naivasha, Kenya.

Vol.76 No.190. Beck, E. *et al.* Alpine plant communities of Mt. Elgon.

I would like to thank the Joint Editorial Subcommittee of Drs. J.J. Hebrard and H. Beentje for their good work.

The *Bulletin* under the able editorship of Mrs Daphne Backhurst continued to appear regularly on a quarterly basis as Vol.17 No.1 - 4.

The *Newsletter* under the able editorship of Mrs Dorrie Brass continued to appear monthly, and is a useful source of quick information on Society matters for local Members.

Both *Scopus* and the *Annual Bird Report* were also published regularly by the Ornithological Sub-Committee.

LIBRARY: The Library functioned smoothly throughout the year, with ample reading space, new reading material and with improved management. The Executive Committee again requested the Librarian to continue attending its monthly meetings as an ex-Officio member and to make recommendations on the spot. This arrangement has worked very well and has contributed to the smooth running of the library.

I would like to thank the following Society members who have assisted me in the running of the Society's affairs throughout 1987:
Mrs Inga Ayres, Mrs Dorrie Brass, Mrs Lisa Campbell, Mrs Marjorie Watts. Mrs Judith Rudnai, Mrs Yolande Williams, Mrs Visagie, Miss Ann Marie Visagie. Miss Karen Fingerman, Miss Rosalie Osborn, Mrs Fleur Ng'weno (Vice Chairman), Dr S.G. Njuguna (Treasurer) and Mrs P. Njuguna. I have a special word of thanks for Mrs Daphne Backhurst for her continuous assistance at the Society office particularly when I have problems with office machines and office personnel. I would also like to give special thanks to Ms Lorna Depew, our acting Hon. Secretary for the splendid work she has rendered since October 1987.

Our relations with the National Museum continued to be cordial, and on behalf of the Society, I would like to thank the Museum Director, Mr Richard Leakey for allowing us to continue using the Lecture Hall and other facilities.

May I conclude my remarks by thanking all Members of the Society, both local and overseas, for their continued support. With your support and suggestions, I am sure the Society will continue to grow from strength to strength despite a few obstacles here and there.

Thank you all for the co-operation and support you have given.

REPORT ON A VISIT TO KANGA MOUNTAIN, TANZANIA

Kanga mountain is an isolated peak in the northern Nguru mountains (6°09'S 37°29'E) rising from the Wami River plain at 380 m to 2 013 m in less than four kilometres. The peak itself is a pinnacle bounded on three sides by precipitous rocky cliffs, with access only via ridges on the southern side. Much of the mountain is forested and the rainfall is relatively high at about 2 000 mm a year with peaks in November and April.

The interest in the mountain is threefold. It is in the central part of the endemic rich 'eastern arc' mountains which run from the Teita Hills in south eastern Kenya to the Uzungwa mountains of southern Tanzania and so should possess many rare species. It has continuous forest cover from 400 m to the peak at 2,018 m which is unusual in East African mountains, and it is poorly known biologically.

The field work was conducted in conjunction with Mr L. Mwasumbi and Mr P. Munyemnyembe of the Department of Botany, University of Dar es Salaam, and Prof. T. Pocs, Mr V.N. Nsolomo and Mr P.C. Temu of the Sokoine University of Agriculture and Forestry, Morogoro. Visits to the mountain were made in November and December 1987 and February 1988.

OBSERVATIONS.

The forests are remarkably undisturbed, there being no paths above about 800 m. This is in marked contrast to many other natural forest areas in Tanzania which are fairly heavily exploited. Cutting for timber is confined to the low altitude ground-water forests near the Turiani to Handeni road. Local people do not hunt in the forests, as there is adequate hunting in the surrounding woodlands; though Leonard Mwasumbi and Paul Mynemnyembe did encounter a wounded buffalo in the Kanga mountain foothills. The Wazigua are the traditional inhabitants of the foothills and the Wami plain, with more recent settlement in the abundant agricultural land by Wachagga from the north (where land is at a premium) who cultivate coffee as a cash crop, and Wakinga and Wabena from the south who came to work on the nearby sugar plantations and then settled. Wahehe from the Uzungwa mountains are involved in the skilled pit-sawing technique by which timber is taken by hand from the forests. This year the short rains were not very heavy and the crops are suffering from water stress. In cultivation were cassava, maize, banana, coffee and occasional patches of sugar cane. The boundary of the forest reserve is marked by a line of teak trees.

The Wazigua are superstitious and believe that bad luck will befall people who venture into the forests unless a ceremony is undertaken. This may account for the undisturbed nature of the forests. The ceremony which we underwent involved the sacrifice of a black chicken whose blood was put into a earthernware pot containing the mashed leaves of a Composite and some other plants. The elder in charge of the ceremony wore a black cloth, and was male. Also participating were two older women and a young man who appeared to be an apprentice. The elements of the ceremony, being the body of the chicken, herbs and some cut branches of *Ficus thonningii* were then arranged in a line and ground maize husks (pumba) scattered over them in conjunction with repeated invocations. After the pumba was spread the *Ficus* leaves were dipped in the mash of blood and herbs in the pot and flicked over our feet and luggage by each of the elders and the young man conducting the ceremony accompanied by the invocations. The guides and porters who were to assist us in the forest refused to enter it until this ceremony had been completed.

Apart from the wounded buffalo, no large mammals were encountered in the forest. Signs of bush pig were seen on the forested ridges above 1 200m, as were what we took to be leopard territory scratch marks on small trees.

Leopard footprints were found in the wet sand by a stream at 800 m. Black and White Colobus Monkeys were observed, and the calls of Blue Monkeys heard. Land crabs frequented the streams up to 1 500 m. The Silvery Cheeked Hornbill and Crowned Hawk Eagle were heard during the day, and the curious looping display of the African Broadbill was seen in the morning and evening. Hyraxes and the African Wood Owl were heard at night.

VEGETATION

The vegetation description is ordered by altitude. Terminology follows that of White (1983).

400 -750 m. The forest is surrounded by Zambezian woodland with the trees *Annona senegalensis, Brachystegia, Kigelia africana, Pteleopsis myrtifolia, Sterculia appendiculata* and *Stereospermum kunthianum*.

Immediately to the west of Kanga village is a ground water forest with the screw pine *Pandanus* and the shrub layer dominated by *Grandidiera boivinii*. The streamside forest at 400 m has a 20 m high canopy and contains the trees *Cola* sp., *Bequaertiodendron natalense, Erythrophleum saveolens, Ricinodendron heudelotii, Scorodophloeus fischeri, Tabernaemontana* sp., and *Ziziphus pubescens;* the herb layer is dominated by *Aframomum angustifolium* in wetter areas and *Olyra latifolia* in drier areas.

On the steep, drier southern slopes above the streamside forest the low canopy thicket (5 - 10 m tall) is Zanzibar-Inhambane undifferentiated forest with woodland on the ridges. With increasing altitude this becomes high canopy (25 - 30 m tall) Zanzibar-Inhambane rain forest with the trees, *Afrosersalisia cerasifera, Anthocleista grandiflora, Antiaris toxicaria, Bequaertiodendron natalense* *Cola* sp., *Draceana usambarensis, Erythrophleum saveolens, Garcinia buchananii, Harungana madagascariensis, Leptonychia usambarensis, Macaranga capensis* var. *capensis, Milicia excelsa, Parinari excelsa, Parkia filicoidea, Phoenix reclinata, Rodognaphalon schummannianum, Sapium ellipticum, Tabernaemontana pachysiphon, Terminalia zambesiaca,* and *Trilepsium madagascariense*. A 20 m tall succulent *Euphorbia* occurs on the rocky forested eastern slopes.

750 - 1 000m. At this altitude the forest is transitional between the lower altitude Zanzibar-Inhambane rain forest and the higher altitude Afromontane forests. The canopy is 25 - 30 m high with large trees reaching 40 m. On the southern side of the mountain it appears to be in an early successional stage with a high density of the pioneer species *Macaranga capensis* var. *capensis* and with a tangled undergrowth. Characteristic trees are: *Harungana madagascariensis, Leptonychia usambarensis, Macaranga capensis* var. *capensis, Parinari excelsa, Sapium ellipticum, Strombosia scheffleri,* and *Tabernaemontana pachysiphon*.

1 000 - 1250m. Well developed Afromontane rain forest occurs here, but still with some Zanzibar-Inhambane elements, for example, *Odyendea zimmermanii* and *Filicium decipiens*. The forest is well developed and has a 30 - 35 m canopy with emergents to 45 m. Large trees include, *Albizia gummifera, Allanblackia stuhlmanii, Alsodeiopsis schurmanii, Aningeria adolfi-friedericii, Bequaertiodendron natalense, Bersama abyssinica, Chrysophyllum gorungosanum, Cola greenwayi, Cylicomorpha parviflora, Drypetes reticulata, D. usambarica, Ficalhoa laurifolia, Ficus sur, Filicium decipiens, Leptaulus holstii, Macaranga capensis* var. *capensis, Myrianthus holstii, Mystroxylon aethiopicum, Newtonia buchananii, Odyendea zimmermannii, Parinari excelsa, Phoenix reclinata, Polycias fulva, Rapanea melanopholoeos, Strombosia scheffleri, Syzygium guineense* subsp. *afromontanum, Trichoscypha ulugurensis, Trilepsium madagascariense, Xymalos monospora, Zenkerella* sp.

1 250 - 1 500m. A remarkable feature of the vegetation at 1 250 - 1 400m is the occurrence of a heath with the extraordinary tree-like *Xerophyta spekei* on steep rock slopes that appear to be subject to occasional slips. Two plants which grow in the *Xerophyta* heath are in monotypic genera found only in the mountains of eastern Tanzania. These are the straggling white flowered orchid *Neobenthamia gracilis*, and the succulent gentian *Urogentias ulugurica*. Above and beside the *Xerophyta* heath is another heath type which consists of small trees also found in afromontane forest including, *Agauria salicifolia, Cryptocaria liebertiana, Dissotis* sp., *Dodonaea angustifolia, Filicium decipiens, Harungana madagascariensis, Maesa lanceolata, Maytenus acuminata, Myrica salicifolia, Nuxia congesta, Parinari excelsa, Peddiea subcordata, Phillipia* sp., *Polycias stuhlmannii, Rapanea melanophloeos, Schefflera goetzenii, Xymalos monospora*. The small tree heath is also characterised by a large *Encephalartos* and *Smilax kraussiana*.

Between the steep ridges and rock slabs of the heath vegetation there is Afromontane rain forest with a canopy of 20 - 30 m and the trees *Albizia gummifera, Allanblackia ulugurensis, Beilschmeidia kweo, Craibia brevicaudata, Cynometra* sp., *Domboya* sp., *Drypetes usambarica, Entandrophragma excelsum, Erythroxylum emarginatum, Ficalhoa laurifolia, Garcinia kingaensis, G. volkensii, Hirtella megacarpa, Isoberlinia scheffleri, Mystroxylon aethiopicum, Newtonia buchananii, Ochna holstii, Parinari excelsa, Phoenix reclinata, Rawsonia reticulata, Strombosia schefflerii, Syzygium guineense* subsp. *afromontanum, Tabernaemontana* sp., *Trichoscypha ulugurensis*.

1 500 - 2 000m. The upper part of the forest from 1 500m to the summit is low canopy (10 - 20 m, taller in the valleys than on the ridges) Afromontane rain forest. The herb layer is dominated by Acanthaceae and the shrub layer by Rubiaceae, trees include: *Afrosersalisia* sp. ?nov., *Aguaria salicifolia, Allanblackia ulugurensis, Apholia theiformis, Cassipourea congoensis, Garcinia volkensii, Ilex mitis, Macaranga capensis* var. *kilimandscharica, Myrica salicifolia, Nuxia congesta, Ocotea usambarensis, Podocarpus falcatus, Polycias stuhlmannii, Rapanea melanophloeos, Phoenix reclinata, Rawsonia reticulata, Syzygium guineense* subsp. *afromontanum*, and *Xymalos monospora*.

Summit area. The summit area consists of a 2 ha. patch of low grassy heath about on the western side and forest on the eastern side. To the north, east and west there are steep cliffs. On the south-east access is possible where a valley runs up to the summit forest. On the southern side there is a 3 m high rock lip with *Streptocarpus hirsutissimus* and *Impatiens sodenii* growing along the edge. *S. hirsutissimus* also grows in the summit heath, as does *Urogentias ulugurica*. A few small clumps of stunted trees with *Myrica salicifolia* and *Polycias stuhlmannii* 2 m high occur in the heath.

The summit forest has a 5 - 10 m canopy with the trees, *Afrosersalisia* sp. ?nov., *Agauria salicifolia, Allanblackia ulugurensis, Cussonia lukwangulensis, Garcinia volkensii, Ilex mitis, Macaranga capensis* var. *kilimandscharica, Maesa lanceolata, Myrica salicifolia, Peddiea subcordata, Podocarpus falcatus, Polycias stuhlmannii, Rapanea melanophlóeos, Ocotea usambarensis, Schefflera myriantha, Syzygium cordatum*. The highest point is marked by a concrete block. This has become overgrown in a thicket of *Mimulopsis, Phillipia* with *Podocarpus* regeneration 2 m tall, *Lasianthus peduncularis* 2 m tall, *Syzygium cordatum* 4 m tall, *Macaranga capensis* var. *kilimandscharica* 4 m tall, and *Myrica salicifolia* 4 m tall.

NGURU SOUTH FOREST RESERVE

A brief visit was made to the Nguru South Forest Reserve above Mhonda Mission. In contrast to the Kanga Mountain forests, those of the Nguru have been selectively logged for many years. Mhonda Mission has buildings 100 years old and the main mission house which is constructed from *Milicia excelsa* is 80 years old.

The mission has a carpentry school, and they are now using *Entandrophragma excelsum* as the supply of *Milicia* is exhausted. In the forest some very large *Entandrophragma* stumps several metres in diameter were found which had been logged many years previously.

The forest appears to be rather wetter than Kanga, and there are sizable rivers flowing from it. The agriculture on the slopes is well established, with mature trees of *Mangifera indica, Artocarpus heterophyllus, Theobroma cacao,* and *coffea robusta.* Still remaining within the cultivation at between 600 and 900 m are *Milicia excelsa, Parkia filicoides,* and *Rhodognaphalon schumannianum.*

The Nguru Mountain forests are extensive, and although much of the lower slopes have been cleared for cultivation, they still extend down to 700 - 600 m.

It was not possible to reach the higher altitude forests in a short visit, as the main effort of the expedition was concentrated on Kanga mountain. The southern Nguru are nearly 2 400 m high, and the forests are briefly described here up to 1 450m. The forest was entered at 900m and it is described below by altitude.

900 - 1 000m. Zanzibar-Inhambane transitional rain forest with a canopy 30 - 40 m. Herbs include *Piper umbellatum, Leptaspis cochleata, Calanthe sylvatica,* shrubs include *Memecylon cogniauxii, Pauridiantha paucinervis, Lasianthus kilimandscharica,* trees include *Afrosersalisia cerasifera, Albizia gummifera, Allanblackia stuhlmannii, Alsodeiopsis schumannii, Cephalosphaera usambarensis, Chrysophyllum gorungosanum, Cylicomorpha parviflora, Drypetes reticulata, Ilex mitis, Isoberlinia scheffleri, Leptaulus holstii, Leptonychia usambarensis, Macaranga capensis* var. *capensis, Mesogyne insignis, Myrianthus holstii, Ochna holstii, Octoknema orientalis, Odyendea zimmermannii, Parinari excelsa, Pandanus* sp., *Polycias fulva, Syzygium guineense* subsp. *afromontanum, Strombosia schefflerii, Tabernaemontana* sp., *Trichoscypha ulugurensis, Trilepsium madagascariense, Uvariodendron usambarense.*

1 000 - 1 250 m. Afromontane rain forest. Canopy 30 - 35 m. Old pit saw sites of *Entandrophragma excelsum* are now occupied by a stand of poles of *Cylicomorpha parviflora.* Trees include *Beilschmeidia kweo, Cylicomorpha parviflora, Garcinia kingaensis, Lasiodiscus usambarensis, Newtonia buchananii, Zenkerella ?egregia.*

1 250 - 1 450m. Afromontane rain forest. Canopy 20 - 30 m. On steep slopes, *Allanblackia ulugurensis, Aningeria adolfi-friedericii, Beilschmeidia kweo, Bequaertiodendron natalense, Chrysophyllum gorungosanum, Craibia brevicaudata, Ficalhoa laurifolia, Garcinia volkensii, Mitragyna rubrostipulata, Myrianthus holstii, Parinari excelsa, Phoenix reclinata, Strombosia schefflerii, Tabernaemontana pachysiphon.*

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White, F. 1983. *The vegetation of Africa.* Paris: UNESCO.

Jon C. Lovett & Duncan W. Thomas, Dept. of Botany, University of Dar es Salaam and Missouri Botanical Gardens, P.O. Box 299, St. Louis, Missouri 63166, U.S.A.

We gratefully acknowledge support from the National Geographical Society and World Wildlife Fund for the field work.

CORRIGENDUM: On page 20 under the heading VEGETATION para. 4, one species was inadvertantly omitted:

On the steep, drier ....*Sapium ellipticum, SORINDEIA MADAGASCARENSIS, Tabernaemontana pachysiphon,* ....

FURBALLS OF MYSTERIOUS ORIGIN

While I was living in Masailand some years ago some of my Masai friends presented me with a number of furballs. They ranged from 3 cm diameter to about 6 cm and were of various colours. Some were almost white, others dun-coloured and others again almost black; but the colours were always uniform. They were very solid and the outside was in most cases like felt. Only one of them had a furry, fluffy outside but even that one was quite solid.

The Masai told me that they came from lion's stomachs. I tried to investigate the matter by asking as many people as possible whether they had ever come across such balls. None of the people I approached, among them several hunters - had ever seen these coming from a lion's stomach, but some professed to having heard of them from others. The hunters said they would not dream of opening up the stomach of a lion they had shot as it was a far too messy business.

I then asked Dr Hans Kruuk to identify the hairs that made up the balls. He had a reference collection of animal hairs with which he could compare his findings. The following is what he found, by individual furballs:

1) cattle, 2) lion, kongoni, 3) zebra, kongoni, 4) lion, 5) cattle, 6) cattle 7) lion, cattle.

It was difficult to come to any conclusion on this basis. It could have come from the stomach of cattle who picked up some animal hairs that had clung to the grass they had eaten. It could have come from lions feeding on wild as well as domestic animals. The presence of lion hair can easily be accounted for from grooming.

I asked more questions. Finally I found Chris Hillman who said he had often seen similar furballs in the stomachs of Eland which he was then studying.

I did not pursue the matter further. If anyone knows anything more about such furballs, either from lion or herbivore stomachs, I would appreciate it very much if they could pass the information on to me.

Judith Rudnai, Box 56519, Nairobi.

DANCE OF THE GREY-BACKED CAMEROPTERA

On Sunday 11 April, 1988 I took my dog for a walk in the pocket of forest near Gigiri just off Peponi Road. It had been raining, the trees were putting out new leaves and there were puddles in the muddy road. On the corner where the houses stop and the forest begins, I heard a loud 'meeping'. In a tree, interlaced with thick creeper stems, was a Grey-backed Cameroptera performing a 'mating dance'. One bird, body and head held parallel to the branch, stood in one place while the other leapt up and down to a height of at least 30 cm or even more off the branch, like a fast bouncing tennis ball. Both were 'meeping' loudly and insistently and also wing-shivering. So intent were they on their performance that I was able to approach quite close. The female moved away to another nearby branch and the male followed and did his bouncing ball act in front of her. They did this five or six times, then the male leapt on the female who seemed to be taken by surprise, hestitated and then flew off from under him and out of sight. It was an extraordinarily intense and amusing ritual to watch.

[illegible] Brass, Box 59196, Nairobi.

LETTERS TO THE EDITOR

Dear Sir

Wild Dogs in Hells Gate National Park

Driving late in the evening through the main gorge on 25 March 1988, just as it opens out onto the plain to the west of Fisher's Tower, three Wild dogs trotted towards us down the track.

They all appeared to be in perfect condition, and in typical Wild dog pattern, preferred to almost totally ignore the car. They stopped in the track and almost indignantly 'demanded' that we move off so that they could pass. Eventually they passed us on the grass, only a few metres from the car, and carried on down the gorge in a very determined fashion.

It is delightful to see how this little gem of a park has improved since the cattle were removed . . game is very plentiful and tolerant.

Peter Davey, Box 41822, Nairobi.

Dear Sir,

We live at 2 133m in Upper Kiambu. At this time of year our two Hymalayan Cherry trees *Prunus puddum* come into flower.

Yesterday, 20 March, I identified seven different sunbirds feeding on the blossom. They are - Bronze, Golden-winged, Variable, Green-headed, Eastern Double-collared, Tacazze and Amethyst Sunbirds.

Some years back I reported a similar situation, and that time we also had the Malachite Sunbird here, but so far this year, it is not in evidence.

However, it is unusual to have so many different species feeding together at one time, and it for this reason that I report it.

Tom Grumbley, Box 200, Kiambu.

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REVIEW

FLORA OF TROPICAL EAST AFRICA

Euphorbiaceae Part 1. By A.R. Smith. pp.407. Price £39.
Crassulaceae. By G.E. Wickens. pp.66. Price £9.
Published by A.A. Balkema, P.O. Box 1675, Rotterdam, Netherlands. These two volumes will be available at the Herbarium, National Museums of Kenya, in the near future at a discount of 25% on the European prices.

The Flora of Tropical East Africa is a series of scientific treatments of all plants occurring in Uganda, Kenya and Tanzania. The parts appear in volumes of varying size, each one treating a family or (in the case of large families such as Euphorbiaceae) part of a family. Each family is treated by a reputed scientist: the series is edited by R. Polhill at Kew, with assistance from the East African Herbarium. The last few years publication has been accelerated, and about two-thirds of the series is now complete.

These books are not field guides; the parts which have already appeared occupy nearly a metre of shelf space. They are detailed scientific works, but anyone with patience to learn some botanical terms, and to look at the plants carefully will be able to use them.

Euphorbiaceae Part 1 is no exception to this rule. Although this is one of the most difficult families in the region, I find the keys better than anything which has been published for this family so far, and they are refreshingly free from very complicated terms; some specialised terms dealing with the complicated flower structure are explained in the family description. The family key is relatively easy to use, when one has good flowering material: fruiting material is needed for only six key couplets (in addition to flowers!) but one can always try both leads and check the descriptions.

65 genera are treated in Part 1. Part 11, also to be published in 1988, will treat the remaining eight genera, including *Euphorbia* itself, as well as *Micro--desmis* and *Hymenocardia*, which have been split off into separate families. Each species is treated in great detail, with a full description, the pertinent literature and synonymy as well as notes on habitat and distribution (both inside and outside East Africa). Every genus is illustrated with at least one full-page plate, specially prepared for this book and are of a very high standard. Large genera, such as *Phyllanthus* and *Acalypha*, are illustrated with more than one plate.

The Part on Crassulaceae is of the same high standard, although not all the illustrations are originals. Horticulturalists will be interested with the treatment of genera such as *Sedum* and *Lalanchoe*.

My main criticism on both Parts is that the provinces and districts in the distribution treatment are those of the old colonial administration; Northern Frontier Province and Masai District will not convey much to young Kenyans. The reason given for this is that the series, which started in 1950, needs consistency in this respect; I feel that one can make too much of consistency, when for the last 20 years a new and stable system has been in use in Kenya.

Still, this is a minor criticism of what is surely the definitive treatment of these families for decades to come. The *Flora* is of a very high standard of quality, better than anything else appearing on this continent, and rivalling the best floras of other continents.

H.J. Beentje.

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BIRDWATCHING IN THE MAU FOREST

If you do not mind straining your neck by craning it to look at little chirping things 30 metres above you; in a dripping, wet, noisy, beautifully unadulterated forest - then go up to the south western Mau, go to the Kipteget River. Take with you huge doses of patience as birdwatching in a dense forest is an arduous task. You must be prepared to see starlings flitting in the canopies of the trees next to the camp during your entire stay without being sure whether you are seeing Stuhlmann's Starling or whatever? There are colourful Bush Shrikes to be seen and several other birds one does not usually encounter on safaris. We had a Great Sparrow Hawk displaying above us for several hours, and we are still not certain whether we should believe we had seen the Blue-throated Brown Sunbird, not recorded on the Mau so far. There were interesting mammals to be seen too. The Red Forest Duiker and a Sun Squirrel, I think... In the night there were Bushbuck and Bushpig. The most abundant mammalian species however, were the rats inhabiting the Fishing Hut.

The Fishing Hut belongs to the Kericho Sotik Fishing Club. At one time it must have been a very comfortable dwelling, but it has been broken into several times so now is devoid of furniture except for a table. It is said that the roof does not leak, the fireplace is good but you have to take everything with you.

The hut is at about 2000 metres and some 3 - 4 km from the forest edge bordering upon the upper reaches of the African Highland Produce Co. Ltd., tea plantations. The trek to the hut does require a four whell drive vehicle when wet - and it is probably wet all the time. From the hut a footpath (covering a subterranean pipe line) leads along the Kipteget River up to the Coryndon Falls. The vegetation changes frequently and we found Sir Michael Blundell's book on wild flowers helpful. From Coryndon Falls one can ascend further up the mountain towards Christmas Falls, but up there are some squatters and there is considerable damage to the forest (which I have seen from the air).

The Kericho Sotik Fishing Club is worth supporting as their hut provides an excellent base for a birding excursion in an otherwise inaccessible area. If there is some support forthcoming, the hut may be repainted and repaired a bit. Those interested should write to: Mr D.F.G. Blaxall, Box 223, Kericho for bookings. Membership and booking fees are very reasonable. I do not know how many birdwatchers are fishermen, but I am told that the trout in the Kipteget River are excellent.

And, by the way, there were gorgeous butterflies everywhere although the most noticeable insects were safari ants and ticks.

Imre J.P. Loefler, Box 47964, Nairobi.

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WILD FLOWERS IN TSAVO WEST NATIONAL PARK

Tsavo West National Park is well worth a visit by flower lovers as the Park at the right time of year can be a mass of delightful flowering shrubs and herbs. Recently on two trips, one at the end of October and the other in the middle of January 1988, we recorded more than 92 species. Amongst these were *Siphonochilus aethiopicus*, nestling at the foot of a large rock just below the self service bandas at Ngulia. A number of specimens of *Drimia altissima* at their very best together with *Anthericum venulosum* on the track leading from Rhino Valley up to Chaimu Crater and many shrubs of *Triaspis niedenzuiana* in bloom at the side of the track. Rhino Valley itself, especially on the eastern side, was covered with *Grewia bicolor* in full flower and *Grewia tembensis* var. *nematopus* was noticeable, again on the track up to the volcanic outcrop near Chaimu, whilst just below the bandas *Saba comorensis* was a wonderful sight. *Albizia anthelmintica* was also in bloom, especially one particular tree not far from Mzima Springs which was an arresting sight. *Cassia singueana* was not in flower but *C. abbreviata* was just coming into bloom. Along the lower western road to Ngulia Lodge were large patches of a lovely purple *Sesamum* sp. and again in Rhino Valley some good examples of *Vigna frutescens* and *V membrenaceae* ssp. *caesia*. There were many examples of *Adenium obesum* and especially in October, *Delonix elata* and the Baobab trees *Adansonia digitata* were in full flower and well worth seeing. *Pentas parvifolia* which shows itself to particular advantage in this Park was not yet in full flower on either visit and only a small area was seen in the lava belt on the road going down to the Tsavo River not far from Kilaguni. In October, *Ipomoea kituensis* was a marvellous sight all along the road leading to Ngulia Lodge itself and the sides of the road had numerous examples of *Crotalaria axillaris* and *C. laburnfolia* var. *tenuicarps*. The park generally is excellent for the family Malvaceae and we saw *Hibuscus canabinus* in various colour forms; curiously enough it often seems to thrive in the lava belts. Also *H. pycnostemon* and *Sida cordifolia*, this latter especially strong in the rocky area leading up to Chitani. *Pentanisia ouranqayne* which is such a feature on the roadsides of the Park, particularly going towards Kilaguni from the Mtito Andei entrance with its remarkable startling blue flowers was rather subdued, we saw very few specimens in flower, probably due to the good rains which had just fallen. Both *Ipomoea garckeana* and *I. hildebrandtii* ssp. *hildebrandtii* were seen, the latter especially in great profusion on the rocky bushland going up to Ngulia Lodge. Also in Rhino Valley were good areas of *Ocimum hadiense* springing up from the shorter grass in *Acacia-Commiphora* woodland areas. As usual the cut-off drains and roadsides were speckled with *Heliotropium steudneri* and *H. undulatifolium* and many examples of *Commelina* species, *C. petersii* and *C. latifolium*. What a lovely blue these *Commelina* present to us, it would be interesting to see if the flower size and vigour could be improved by selection as they would make a good garden plant with a colour which is always in short supply. I have tried this with *Pentanisia ourangune* but after a year or two the plants vanished and I suspect they are selective in their water and sunshine requirements. All over the Park, nearly always in sections where rocky hills or great boulders were prominent, *Tylosema fassoglense* was much in evidence both at the Ngulia bandas and near the Lodge. On our return to Nairobi in January the roadside was a mass of *Acacia seyal, A. senegal* and *A. nilotica* in full flower; the blossom had sprung into evidence in the four days in which we were in the Park and I saw one fine example of *Lawsonia inermis* peeping out of the bush alongside the main road between Mtito Andei and Kibwezi; here also we found *Ruella patula* in its darker blue-lilac flower near Sultan Hamud.

Michael Blundell, Box 30181, Nairobi.

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GULL-BILLED TERN ENQUIRY 1987/1988

The aim of this enquiry is to establish recent trends in populations of Gull-billed Terns *Gelochelidon nilotica* in the western Palaearctic and in Africa. We also intend to obtain data on potential threats to migrating and wintering birds, and to immature birds before their first breeding season.

Would anyone who has records of Gull-billed Terns during the period 1985 to 1988 please write to us and we will send a questionnaire. If you know of others who may have information on these birds, please let us know.

Thank you very much in advance. Please write to:

Dr J. -P. Biber, Natural History Museum, Bernastrasse 15, CH-3005 Berne,
Switzerland.

Or to:

Dr A.P. Moller, Dept. Zoology, Uppsala University, Box 561, S-751 22 Uppsala,
Sweden.

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REQUESTS FOR INFORMATION

LIONS IN NAIROBI NATIONAL PARK

In view of the rapid changes taking place in the Kitengela area, involving much construction and fencing. I anticipate considerable changes in the Nairobi National Park game population during the next few years.

For this reason, I want to establish baseline information on the Park lion population during the late 80s.

I would be grateful to anyone who could supply me with information on lions they have seen during the past two years and for the rest of 1988.

The information desired is as follows:

DATE
AREA: between what numbers or in what area as nearly accurately as possible
NUMBER of lions, if determined
SEX of lions, if determined
AGE adult, subadult or cub.

Even if the information contains only some of these details, it would still be appreciated. I am going into the Park as often as I can but the more data I can gather, the better.

Many thanks in advance to anyone who could help in gathering these data. Please send information to -
Judith A. Rudnai, Box 56519, Nairobi.

INDIAN HOUSE CROW

Will anyone who sees an Indian House Crow in the Nairobi area, or indeed anywhere away from the coast up-country, please inform me. Any information on nests is particularly welcome.

There is much greater hope of eliminating this pest if an attack is launched when the numbers are still small rather than when the population has become a menace.

Rosalie M. Osborn, Ornithology Unit, Wildlife Conservation and Management Department, Box 40241, Nairobi. Tel. Nairobi 500488 or 501618.

7th PAN-AFRICAN ORNITHOLOGICAL CONGRESS

There will be some people, particularly from India and from other African states and even from elsewhere in Kenya, who would be very keen to attend this bird congress but who have difficulty in finding enough money. Will anyone who would like to welcome such a person (or people) free in their homes during the Congress which lasts from August 28 to September 5, 1988 please contact :
Rosalie Osborn at Box 40241, Nairobi, or telephone her at Nairobi 500488 or 501618 during office hours

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The above list supercedes that which appears on the back cover of this Bulletin. The remaining information remains the same.

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Membership

This offers you free entry to the National Museum, Nairobi; free lectures, films, slide shows or discussions every month in Nairobi; field trips and camps led by experienced naturalists; free use of the Joint Society-National Museum Library (postal borrowing is possible); a copy of the EANHS Bulletin every four months and a copy of each Journal published during your period of membership. The Society organizes the ringing of birds in eastern Africa and welcomes new ringers. It also runs an active Nest Record Scheme. Membership rates are given at the foot of the page.

Journal

The Society publishes the Journal of the East Africa Natural History Society and National Museum. Each issue consists of one paper; sometimes two or more short papers may be combined to form one number. Several may be published during one year. Contributions, typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five copies of their article free, provided that these are ordered at the time the proofs are returned.

EANHS Bulletin

This is a duplicated magazine issued four times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (EANHS Bulletin), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

Scopus

The Ornithological Sub-Committe publishes this bird journal five times a year, cost KShs 100 per annum. All correspondence to D.A. Turner, Box 48019, Nairobi.

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	Local	*Overseas*
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Life membership	KShs 1500	US$144 or Stg £90

Subscriptions are due 1 January. From 1 July you may join for KShs 50 and receive publications from that date. Application forms for membership are obtainable from the Secretary, Box 44486, Nairobi.

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BULLETIN

A publication of the East African Natural History Society, Box 44486, Nairobi, Kenya. Price 10 shillings.

EANHS BULLETIN Volume 18 (3) SEPTEMBER 1988

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ON THE MIMETIC ASSOCIATIONS OF *EUXANTHE WAKEFIELDII* (WARD) TO ITS DANAID MODELS. (LEPIDOPTERA : NYMPHALIDAE, DANAIDAE

INTRODUCTION

A. Six known species constitute the genus *Euxanthe*, all of which inhabit lowland forest in West, Central, East and South-east Africa, including the island of Madagascar (van Someren 1975; d'Abrera 1980; Smiles 1985). Males possess territories which they guard from favourite perches, positioning themselves head-down (Smiles 1985). Both sexes usually fly slowly and buoyantly (Smiles 1985) but when disturbed they are capable of flying fast (Rydon 1971).

The general behaviour patterns of the mimic *E. wakefieldii* have already been covered by earlier lepidopterists. Kenway (1929) says the male's flight is "lofty" and that it is attracted to the exudates from *Kigelia pinnata* de Candolle (Bignoniaceae) at midday and afternoon. Pennington (1978 and Rydon (pers. com.) note males hilltopping during the midday hours.

Kenway (1929) also mentions that the female is on the wing early and has a low and feeble flight, resting on the ground or foliage "in a tired sort of way". Later the female butterfly joins the males feeding on tree sap and readily comes to fruit bait. Finally, favouring a horizontal twig of *Kigelia* or similar trees she rests, positioned wings-downward, often at approximately 2 - 3 metres from the ground.

B. The family Danaidae is represented by twenty six species in Africa and Madagascar (Carcasson 1981). They are considered distasteful (Williams 1969; Carcasson 1981) and therefore provide models for a large number of mimics in several unrelated families (Carcasson 1981).

Three Danaid species are the suggested models of *E. wakefieldii*. Ackery and Vane-Wright (1984) say that *Amauris ochlea* (Boisduval), *A. niavius dominicanus* Trimen and *Tirumala petiverana* (Doubleday) all have a slow, weak flight, and that the two former species tree-top in the early morning hours. The three Danaids are noted to be gregarious, each species congregating in a single roost consisting of several individuals, under shade during the 'heat of the day'. They have also been observed roosting in the same area, one species in association with the other two (Ackery and Vane-Wright 1984; pers. obs. 1981).

C. With regard to mimicry, Kenway (1929) suggests that the male resembles *T. petiverana* but goes on to say that the habits and flight do not suggest a very close association. Smiles (1985) also doubts this mimetic association.

Females, on the other hand, resemble the pattern of *A. ochlea* but give the overall impression of *A. n. dominicanus* when flying (Rogers 1909; Kenway 1929, Wood 1933). Rogers (1910) also suggests that the female's resemblance to *A. niavius* "is increased by the approximation of habits".

NOTES ON THE HABITS OF *EUXANTHE WAKEFIELDII* AND ITS DANAID MODELS ON THE TANZANIAN COAST

The notes below are a result of twelve days of observation in a garden at Nguvumali, Tanga, during the month of August 1981. There are additional notes on the behaviour of other populations of *E. wakefieldii* and its Danaid models further inland. Observations for inland populations have been collected over a six month period in the Rau Groundwater Forest Reserve, Moshi (Kilimanjaro Region) - and three months in the Lake Manyara National Park (Arusha Region).

Populations of *A. ochlea*, *A.n. dominicanus*, *T. petiverana* and *E. wakefieldii* were flying in abundance within a semi-forested habitat at the coast of Tanzania. *A. ochlea* and *A. niavius* flew mainly in the early morning and late afternoon. At midday and in the early afternoon I often recognised communal roosts of the two *Amauris* species. Such roosts consisted of several individuals clustered together on a leafy shoot or shrub, beneath or alongside overgrown hedges that provided adequate shade. This habit was noted on every day of observation. Sometimes communal roosts of each of the abovementioned *Amauris* species were about a metre apart or further, but both species never shared the same roosting spot

Females of *E. wakefieldii* would exhibit similar behaviour patterns. They would usually fly about in a leisurely manner during the early morning hours and later join males that were clustered together with various species of *Charaxes* at wounds on *Delonix regia* (Bog.r) (Caesalpiniaceae) trees, from which sap oozed out. At around midday and during the afternoon they were frequently observed flying weakly at ground level and resting on young shoots close to the aggregations of either of the two *Amauris* models. Towards the late afternoon they returned to join the males feeding on the sap of *D. regia* trees.

T. petiverana exhibited a behavioural aspect that I have not observed elsewhere in Tanzania. Several individuals would rest around a thin, bare twig on dry hedges or short trees during the midday and afternoon hours. They were seen resting near the ground or about 1.5 m above it. During the early morning and evening they would fly buoyantly or glide from one flower to another in the garden.

E. wakefieldii males also maintained communal roosts. (This habit was also noted in a population of *E. tiberius* Gross-Smith at the Kenya coast (Rydon 1971)). In the early morning and late afternoon the males would feed on exuding sap from wounds on *D. regia* trees and, like *T. petiverana*, would rest together at midday and early afternoon. Males would congregate in threes or more (the maximum appeared to be five) upside-down on a bare horizontal twig of *Cassia siamea* Lamark (Caesalpiniaceae, about 1 - 2 m off the ground. Occasionally another roost was observed beneath a horizontally lying telephone wire in the shade where four individuals rested upside-down, about 3 cm apart. The few other males that existed in this habitat chose not to join the roosts, except occasionally, and instead patrolled their territories from their favourite perches. Among such perches were included a fence post, electric wires and dead branches atop *D. regia* trees. Sometimes two males that shared the same territory would fly together in a sort of 'pas de deux' dance for several minutes. (Rogers (1910) has also observed this habit in *E. wakefieldii* males, whereas Rydon (in litt.) has observed the habit in both *E. wakefieldii* and *E. tiberius* males.).

NOTES ON INLAND POPULATIONS OF *E. WAKEFIELDII* AND THEIR DANAID MODELS

A.n. dominicanus and *T. petiverana* are the only models that I have recorded in the Rau Groundwater Forest Reserve and Lake Manyara National Park. I have not recorded *A. ochlea* in either of the two areas nor have I come across any known or documented records.

A.n. dominicanus flies singly or in loose pairs in the early mornings, feeding at low-lying flowers. It is later observed flying above the tree canopy, usually in pairs. At around midday and in the afternoon it is found resting singly under the shade of small shrubs. During the evening hours the species can once more be seen tree-topping or feeding at flowers on low trees

The female of *E. wakefieldii* usually feeds in the morning, fluttering at low levels like an *Amauris*. She feeds on the sap of *Croton macrostachyus*

Hochst. (Euphorbiaceae) and *Kigelia africana* Lam. (Bignoniaceae) in Lake Manyara National Park whereas in the Rau Forest she prefers the juices of *C. dichogamus* Pax (Euphorbiaceae). During the midday and afternoon hours she rests under the shade of large leaved trees, preferring to perch upside-down. In the evening the female returns to feed at her favoured trees, flying low and weakly.

T. petiverana feeds on flowers of low shrubs and small trees in the morning. The characteristic flight is slow and buoyant. At midday and afternoon they feed very leisurely or rest singly, intermittently, on vegetation at ground level. In the evening they can be observed feeding at flowers low down. I have only recorded the species migrating once in Kilimanjaro Region, during 1982. This suggests that the species is, on occasion, gregarious further inland.

E. wakefieldii males feed in the early morning on the same food sources as the females and before midday they roost singly on tree trunks. At midday and during the afternoon the males actively patrol their territories, chasing away any intruders. As in the Tanga population, the males that share the same territory fly in the air, tumbling over each other in a sort of dance. Towards the late afternoon and evening the males return to feed on the sap of the trees mentioned above.

DISCUSSION

As shown by my observations on *E. wakefieldii* and its Danaid models on the coast of Tanzania, the mimetic association is one that is close. The pale turquoise male mimic has a similar colour pattern and behaviour comparable to its model *T. petiverana*. However, in forest and wooded habitats further inland, *T. petiverana* is seen singly or in loose pairs. This fact probably explains why the male of *E. wakefieldii* is never seen to possess communal roosts further inland, where it is frequently seen flying singly or in pairs.

Wing colour pattern and the habits of the female mimic correspond with its *Amauris* models. The female of *E. wakefieldii* resembles *A. cochlea* in terms of wing colour pattern but, in flight, is comparable to *A.n. dominicanus*, altogether giving it an overall impression of the latter sub-species. This association must put the mimic at an advantage over its predators at Nguvumali, Tanga, as both models are present in the garden habitat and a potential predator will have difficulty in distinguishing the mimic from either of the two distasteful *Amauris* models.

As only *A.n. dominicanus* seems to occur in the inland habitats mentioned in in the last section, and is not gregarious, the female mimic can only rely on its overall impression of *A.n. dominicanus* whilst flying and not to losing itself among communal roosts of its *Amauris* model.

I conclude that both sexes of *E. wakefieldii* are close mimics of their Danaid models on the coast of Tanzania. Inland populations of *E. wakefieldii* differ considerably in behavioural aspects from their models and rely on the slight resemblance of colour-pattern and similar flight characteristics for protection.

Why do the coastal populations of the mimic have a closer mimetic association with their Danaid models than those populations further inland? Further and longer research is definitely needed to understand this particular mimetic association in different types of habitat, both coastal and inland - this paper has been written as a note to stimulate interest in the mimicry of African butterflies.

ACKNOWLEDGEMENTS

I would like to express my gratitude to Mr P.R. Ackery and Dr A.H.B. Rydon for providing me with photocopies of most of the original papers cited. I especially thank Dr A.H.B. Rydon for correcting the manuscript, providing valuable field observations and advice that made this paper possible

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N. Cordeiro, c/o Hampshire College, Amherst, MA 01002, U.S.A.

FURBALLS or TRICHOBEZOARS

In the farthest darkest corner of every veterinary college lies the pathology museum. And in the farthest darkest corner of the pathology museum lie dusty glass jars containing "balls" found in the various body cavities of animals. There are several different types including trichobezoars, more commonly called furballs, phytobezoars, plant fibre balls; and enteroliths, mineral concrements composed mainly of phosphates.

Trichobezoars are not uncommon in feline stomachs and the forestomachs of of ruminants and are not really pathological specimens, since they rarely cause any clinical problems. Enteroliths, which are most frequent in horses, may occasionally cause intestinal colic. The furballs are presumed to form by deposition of organic matter and inorganic salts around a central core of fur which has been ingested while grooming or eating. Through continual gut movement the bezoars are shaped into balls or cylinders and usually have smooth or felt-like surfaces, though larger ones may be hairy. According to the Oxford English Dictionary the word bezoar is a derivative of Arab or Persian words meaning antidote or anti-poison and they were reputedly found most commonly in wild goats. Perhaps they could make a useful substitute for rhino horn!

Furballs in lion, as described by Mrs Rudnai (*EANHS Bulletin* 18:2 p.23. 1988) may be quite common. The high proportion of the lion trichobezoars containing cattle hair may not be so remarkable. It suggests that they come from a sample population that was skewed in favour of a cattle diet and which had been dealt with by the Masai in a time honoured way.

Paul Rossiter, Box 32, Kikuyu.

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UNKNOWN FORESTS No.1 : KIANGOMBE HILL

On 12 June 1988, I joined a Mountain Club hike up Kiangombe Hill. Although the party failed to find the proper summit, I found the hike an extremely interesting one, as the upper parts of the hill are covered in almost pristine moist evergreen forest.

Kiangombe Hill (00°34'S., 37°42'E.) is situated 30 km due east of Embu. The approach is by way of Siakago village, at the western foot of the hill, and we went up the northwestern slope above Kune village, *ca.* 8 km NE of Siakago. From Kune a motorable track leads in a SW direction uphill, to end at a forest post at *ca.* 1300 m altitude.

As the lower slopes are covered by wooded grassland, and the dominant grass *Hyparrhenia* reaches up to 2 m high at the end of the rainy season, the track to the forest was not always easy to find. The wooded grassland stretches right up to the lower forest margin at 1650 m, and the dominant tree is *Combretum molle*. Other notable species are *Erythrina, Ormocarpum, Heteromorpha, Acacia hockii* and the occasional wild date palm (*Phoenix*); among the herbs are the yellow-flowered thistle (*Berkheya spekeana*), *Dissotis senegambiensis* with bright mauve flowers, and the narrow-leaved *Gnidia apiculata*. On rock slabs *Euphorbia bussei, Xerophyta spekei* and *Ficus glumosa* are conspicuous.

The forest stretches from 1650 m to just below the summit at 1800 m. The slopes are very steep, and a good humus layer makes progress upwards difficult and progress downwards much too fast. The canopy is closed and *ca.* 30-35 m high, and is dominated by *Syzygium guineense* ssp. *afromontanum* (Myrtac.), *Cola greenwayi* (Sterc.), *Drypetes gerrardii* (Euphorb.), *Aningeria adolfi-friedericii* and *Manilkara butugi* (both Sapot.). Less common canopy species are *Croton sylvaticus* (Euph.), *Macaranga kilimandscharica* (Euph.), *Newtonia buchananii* (Mimos.), the largest *Ficus thonningiii* (Morac.) I have ever seen and *Cussonia spicata* (Aral.), while two exciting finds were *Trichilia dregeana* (Meliac. the third Kenya collection) otherwise known from Kakamega and Karatina, and *Cylicomorpha parviflora* (Caric. fourth Kenya collection), the nearest relative to the papaya, with a hollow trunk up to 1.5 m across and a clean, straight bole of up to 25 m high. The understorey is rather sparse, as is the herbaceous undergrowth, and so one can see the lofty trunks soaring up right to the canopy - a most impressive sight. Understorey trees are *Bequartiodendron natalense, Celtis africana, Garcinia volkensii, Maytenus acuminata, Myrianthus holstii* and *Psydrax parviflora* ssp. *rubrocostatum*; near the summit *Rapanea melanophloeos* and *Strombosia scheffleri* come in.

Herbaceous undergrowth is very sparse, with the occasional fireball lily (*Scadoxus*) and *Euphorbia ugandensis*. I did see a few ferns near rocks, and of course saplings of trees are scattered around; *Albizia gummifera* was only found as saplings.

At the edges of small clearings, *Psychotria orophila*, *Canthium oligocarpum* and *Rawsonia lucida* were found; in larger clearings *Myrica salicifolia* and *Maesa lanceolata* occur.

Epiphytes were surprisingly few for such a moist forest, and I only found *Aerangis brachycarpa* (Orch.), normally a dry forest species; but presumably, at canopy level more epiphytes occur. As a botanist, I was usually the one walking behind all the others, and so did not see any birds; but we all heard the screeching of turacos and monkeys (presumably Colobus), and the fruits of *Aningeria* and *Ficus* should provide a good food supply for them.

I estimate the total forest area at 90 ha. The whole hill is County Council trust land, and is not gazetted as forest.

Though a tough walk uphill (ca. 3 hours) as well as downhill (not much less) this forest is highly recommended for a visit by naturalists, as I believe it to be almost unspoilt moist forest, and I myself will certainly go back for a more leisurely visit!

Henk Beentje, East African Herbarium, Box 45166, Nairobi.

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TIMOTHY JOHN BARNLEY 1922 - 1987

For some twenty years or so, at Christmas I have received a card from Tim and Jane Barnley and whichever other members of their family happened to be with them. Last Christmas, to my surprise, I did not receive a card from them. However, as I received notification that they had yet again generously renewed for me a subscription to the EANHS, it did not at first occur to me that anything might be amiss, except perhaps a Christmas card from them. It was a few months later that I learnt the sad news that Tim had died, I Have since heard from Jane, his widow, that he died peacefully in Nairobi on 3 December 1987.

Tim will be greatly missed. His parents came from England to settle and he was born in Nairobi on 7 September 1922. He was educated at Kenton College, then at Blundells in Devon, England. From 1938 - 1940 Tim was employed by the Forestry Department and worked at the Elburgon, Karuri and Karita Forest Stations. During the war, he served with the East African Signals, from 1941 - 1943 in Ethiopia (then Abyssinia) and was promoted to Lieutenant in 1942, then from 1943 - 1946 he served in Burma and was mentioned in dispatches.

After the war Tim began farming in the Kitale area and until Independance was an Honorary Game Warden and an Honorary Fish Warden. Tim and his family continued to farm until 1971, when the farm was sold and Sirikwa Safaris was founded. It was in about 1967 that I first met Tim and Jane and their family. We shared an interest in birds, in fact, I got to know of them through a 'talking' Splendid Glossy Starling they had raised. They had another of these starlings, which was an exceptionally accomplished 'talker' and would accurately mimic the voices of members of the household and sounds from around the house. Also there was a mischievous, tame Ground Hornbill, who enjoyed the freedom of the house and garden. Aviaries housed an array of local birds, which at that time, were permitted to be supplied to *bona-fide* zoological collections, bird gardens and reputable private aviculturalists. There are many records of those birds later breeding successfully in aviaries in Europe and the U.S.A.

I frequently had the pleasure of staying with Tim and Jane at 'Kaibos' on the Cherangani Hills and remember those stays as some of the happiest days of my life. The house was nearly always a hive of activity and I remember especially the period when frequent visitors included Rosemary Owens who was studying the Sitatunga, with Kathy Simpson who was studying De Brazza Monkeys, both at Saiwa Swamp. Then there was the time when fourteen members of the Oxford University Expedition to the Cherangani Hills all stayed at 'Kaibos' and meals had to be served at two sittings.

Recently a contributor wrote of Tim's phenomenal knowledge of birds and how during Society outings there, members were always made to feel they were valued friends rather than just visitors. Tim was quiet in his ways, had a nice gentle, dry sense of humour, combined with a relatively mild, cynical view of life. His expertise was by no means confined to birds, it extended to mammals, both large and small and to all other forms of animal life and to botany too. Many researchers, students and others have reason to be indebted to Tim for his invaluable help and advice. Their gratitude can be found expressed in the prefaces of books and in scientific papers, reports and more general articles. Unfortunately, Tim remained stubbornly reluctant to commit his knowledge to print, feeling, wrongly I am sure, that it was not of sufficient merit or originality. To him, too many authors merely "cribbed" the work of others and many authors, he considered, suffered from "verbal diarrhoea".

Long before the Saiwa Swamp National Park was established, Tim was actively involved with monitoring and protecting the population of Sitatunga and also the De Brazza Monkeys there and thereabouts. He was a leading campaigner for establishment of the park and to that end, I know he did a tremendous amount of work, much of it behind the scenes and, Tim should, I feel, be accorded a great deal of the credit for the eventual creation of the Saiwa Swamp National Park. In recognition of that, it would be fitting if at the Saiwa Swamp National Park, there should be an appropriate memorial to him. Tim's biggest disappointment, was probably the failure to see realised the creation of a Cherangani National Park, with the main purpose of saving the forest from devastation and saving the Bongo on the Cheranganis as well as the other mammals of course.

Tragically, some ten years ago, Tim underwent an operation which went wrong. As a result, he became progressively more crippled and during the latter years of his life, he was frequently in considerable pain and his enforced immobility was an added cause of frustration.

In this appreciation of his life and achievemnts, I am certain that Tim would have wanted me to, and indeed I must, mention the part played by Jane Barnley. In her own right she is very knowledgeable about the wildlife of East Africa, especially the birds. Jane has shared Tim's commitment, his hopes and aspirations and was a constant source of support, bringing to their partnership many sterling qualities, not least her tremendous enthusiasm and phenomenal energy and her perpetual good humour and optimism, even in adversity.

As well as his widow Jane, who hopes to continue at 'Kaibos', Tim leaves two sons, Dick in Bolivia and Bill in England and two daughters, Anne and Julia, both in Kenya.

Malcom Ellis.

NDARA RANCH BY TRAIN

The bird life of the Acacia - Commiphora scrub of the Tsavo Area is very rich and various and it is easy to observe. The tallest trees are none too tall that even a Crombec is not clearly identifiable, and the normally scanty feathery foliage - if any, allows detection of even minimal movement. It is thus a place of special interest and suitability for all, but particularly for those at the earlier stage of the fascinating and rewarding hobby of bird watching.

The Tsavo Parks however, are just a bit too far for the average weekend trip. The road is always dangerous and the 4½ hour drive there and back consumes too large a part of ones precious free time to make it worth while as a weekend trip. In the Parks one is also confined to the hot and dusty car for most of the day.

My wife and I viewed the prospect of a weekend there from all angles and came up with the following plan: To enlist the help of the Ndara Ranch staff to collect us from Voi Station on the outward journey, and deliver us there for the return to Nairobi. They were most co-operative, helpful and efficient. Catching the "fast train" to Mombasa at 7 p.m. on the Friday night, we had a good supper, a reasonable sleep of six hours, were called by the friendly Ticket Inspector at 3.30 a.m. and the train rolled into Voi at 4 a.m. Here the Ranch driver awaited us and a helpful waiter, Jonas, took our baggage to the Land Rover.

We set off in a heavy drizzle and within half an hour were settling into our cottage, the key of which was thrust into our hands by the Night Watchman at the gate. With a cup of tea quickly brewed, we turned in again and closed our eyes till 7 a.m. Both had a good rest and the whole of Day No.1 was ahead of us!

On the domestic side, Ndara Ranch is made up of ten, two bedded bandas - clean and well ventilated. There is a minute kitchenette with sink and draining board, a shower, wash-hand basin and flush toilet. The water is crystal clear - from Mzima Springs. No equipment is supplied, but beds, bed linen, mosquito nets and towels. No hot water - but this is no great loss at the prevailing temperatures. The Swimming Pool is a delight in that heat. The Restaurant supplies a VERY limited menu indeed. Roast chicken, steak, fried eggs and soup with sandwiches, tea and coffee. We found the fresh oranges and mangos we took with us to be very useful.

The return journey: No early packing - the whole day to enjoy! A phone call to the station (Ndara Ranch is on STD. 0147-2178) confirmed our return booking and the Ranch Land Rover took us, after a good leisurely supper to the station in time for the 11 o'clock departure of the "fast" train from Mombasa to Nairobi. This, in turn, delivered us in time to get to the office for a day's work.

Our purposes in this visit were, firstly to test the feasibility of the method and, secondly to see the birds at the end of the Long Rains. In the event, it has proved thoroughly feasible and much to be recommended. The bird situation was interesting. Sixty different species were identified. We did not see a single immature being fed. There was an apparent reduction in the usual large number of birds and of bird song, though the number of species seen was not far different from other occasions. This suggests that in this area at any rate, breeding has been negligible this season. Local residents confirm that rain has fallen on only two days. A check on the Voi meteorological records indicate that significant rain (5 mm or more) had fallen on 18 and 23 March, 7,8, and 18 April and 6 May only

Geoffrey Dorothy Irvine, The United Kenya Club, Box 42220, Nairobi

Dear Sir,

CROWNED EAGLE NEST ON MT. ELGON

I photographed Crowned Eagles *Stephanoaetus coronatus* at two locations in Mt. Elgon National Park on 2 March 1985. The first was spotted at about 10 a.m. along the road near Kitum Cave. The eagle sat on a dead branch two metres above the ground over some thick brush and grass. Something was crying from the brush below the eagle and the bird seemed reluctant to leave the area. An investigation of the area found no source for the crying.

A couple of hours later, while driving through *Hagenia* forest at about 3000 m elevation, on the road to Koitoboss Peak I noticed an eagle flying up the mountain with some difficulty. A Crowned Eagle was carrying the head, shoulders and forelimbs of a newly killed Duiker. The eagle landed in a dead tree near the road without dropping the kill. I think the kill was a Red Duiker *Cephalophus natalensis*. The part the eagle was carrying must have weighed about 5 kg. After a short rest the eagle took off with the kill and flew about 33 metres to a big cedar tree *Juniperus procera*. In the cedar was the eagle nest with a single nestling, fully feathered, and nearly ready to fledge. The nestling's plumage was nearly all white. Both adult eagles sat in the nest tree while I photographed the nest from the ground about 100 m from the tree. I did not see the feeding of the nestling.

Larry Siemens, Wildlife and Fisheries Biology, University of California,
Davis, California 95616. U.S.A.

Dear Sir,

THE NGURU MOUNTAIN RANGE

The Nguru Mountain Range in eastern Tanzania is of great importance to scientists as it is rich in endemism of both flora and fauna. Lovett & Thomas (*EANHS Bulletin* 18 (2): 19-22, May 1988), in their article on the Kanga Mountain and the Nguru South Forest Reserve, contributed some interesting information on part of this mountain range.

What is currently being done to save the remaining montane forests of the Nguru Range ?

I ask this question because when a friend and I visited the Nguru South Forest Reserve in mid-February this year, several areas along the slopes were being burned down to allow for the cultivation of crops before the long rains. According to some residents of Turiani (a small town at the bottom of the mountain), the felling of trees appears to be quite rapid.

Whilst climbing the Nguru Mountain from Mhonda Mission one intermittently comes across several villages all the way up to Maskati Mission. The villagers do not employ contour or step farming and thus a lot of soil erosion takes place along the valley slopes on which they cultivate. After the recent rains the friend with whom I had climbed, wrote: "Due to the rains here the results of continuous cutting and burning are becoming visible and the people had to pay their toll with one life and a great area. What has happened is: on the slope close to where we had been walking, great landslides have occurred causing enormous mud-slides, sweeping away everything. From our house we can see great strips of bare rock where once vegetation used to be ... too bad, so sad."

Is there anything that is being done to conserve the remaining montane forest or do we have to gradually witness nature's rare elements crumble with the mountain ?

The above-mentioned mountain range is one of many in the 'eastern arc' that is in trouble due to man's exploitation. Is it possible for a scientist (or others) involved with the conservation of the 'eastern arc' forests to inform Society members as to the steps being taken to protect and save these montane forests ? - Perhaps in a future *EANHS Bulletin* ?

N.J. Cordeiro, c/o Hampshire College, Amherst, MA 01002, U.S.A.

Dear Sir,

On 23 April 1988, at 08.45 h, four monkeys with white tufts were sighted on the open land opposite the Esso Petrol Station, Limuru Road, fronting City Park. This area is covered by grass.

Of the four 'Sykes' monkeys, one was an adult and the other three were the children. The adult monkey had come out in the open, while the young ones kept to the forest edge.

They were standing on their hind legs, jumping up and down and were observed to be catching termites which were flying low over them, and were seen to be eating them.

Seeta J. Ruparel (aged 12 years), Box 42882, Nairobi.

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REVIEW

THE BEAUTIFUL PLANTS OF KENYA. By John Karmali. 1988. Nairobi: Westlands Sundries. Paperback: pp. 128. Price Sh.140/-.

John Karmali, past chairman of the Natural History Society and eminent photographer has produced another in the 'Beautiful' series; well known for his books on birds he has now given us one illustrating plants. He will be the first to say that this is a new venture for him but he has tackled the subject with verve.

His very fine pictures are a delight, the more common of Kenya's ornamental trees, shrubs and small plants are photographed beautifully with much attention paid to natural light. Neither has he been let down by the colour printing as so often happens; this is well above standard.

The larger trees and shrubs contain an inset with the blooms in close-up, so making identification easy. Each colour plate has a separate page next to it giving information on the plant; this has been planned carefully so that no time is lost in finding and naming the species under query.

This book will give pleasure to many, it is ideal for those who would learn more about Kenya's lovely plants, both indigenous and exotic; ideal for that little gift and ideal for those who would just sit and browse, enjoying the many colour pictures. At Sh.140/- it is real value for money.

Jean Hayes.

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SOCIETY OUTINGS

On 14 and 15 May there was a combined trip to Olorgesailie (14 May) and Magadi (15 May) which was very well attended and enjoyed by all. Yvonne Malcom-Coe was the excellent trip leader and is sincerely thanked by all who attended. Thanks must also go to Mr & Mrs Davies of the Magadi Soda Company for allowing us to use the facility and for their guidance as to the best places to see the birds and plants of the area.

The Olorgesailie camp was a wonderful change from the cold weather which those members resident in Nairobi and the rest of the highlands had been suffering recently. There were several bird walks attended by those at the camp. The wild flowers were still in bloom and were very much enjoyed as were the many birds.

The trip to Magadi was begun with a hike down the gorge behind the Magadi Sports Club. Again there were many wild flowers and birds to admire, to say nothing of the beautiful views over the lake.

The hike was followed by a picnic lunch in the grounds behind the Clubhouse. After a pleasant break, during which several members had a swim in the Club's pool, many of the party continued on to the western arm of the lake. Here, several migrant species such as the Whiskered Tern were still present, as well as the local waders.

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In June, an outing to the Bata Factory estate in Limuru was not well attended due to the rather unpleasant weather. However, those who did brave the elements and attend had a surprisingly enjoyable time. Again, there were flowers and birds galore. The weather cleared just as the climb to the indigenous forest was accomplished and it stayed pleasant for most of the walk along the ridge. The sunbirds (seven species, including both the Eastern and Northern Double-collared Sunbirds) provided a particularly splendid show. Our thanks to the Managers of Bata for allowing us to visit their compound and supplying us with guides.

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In July, the Society had a night-time outing to the A.F.E.W. Giraffe centre in Hardy Estate, Langata. Though a bit cold and rainy, it was nice to get out at night and walk and listen to the various night sounds (frogs, bush baby, crickets). Water beetles were seen as well as frogs. There was tea and coffee in the Centre's snack bar afterwards. Many thanks to Mrs Hegland for organizing the trip for us.

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On 29 August, Jean Hayes kindly invited us to Crescent Island for the day. One family who went along commented that in their whole year in Kenya (during which they have travelled extensively) they have not had such a lovely time. They described the island as a virtual "Paradise". I suspect that their sentiments are shared by others who went. The island was green from the rains and many birds and mammals (including zebra, waterbuck, gazelle and a lone giraffe) were seen. Those of us who knew Priscilla Allen had the pleasure of visiting the place where she is buried and enjoying the very pleasant atmosphere and lovely view from this well chosen spot. A picnic lunch was eaten in Mrs Hayes garden after which the members who wished were able to walk to the end of the island to see the shorebirds congregated there. Our thanks to Jean Hayes for a lovely day.

Lorna Depew, Hon. Secretary.

CORRECTION

CORRECTION TO RECORD OF ZANZIBAR SOMBRE GREENBUL NEAR ELDORET

In the *EANHS Bulletin* 1984: 28, I reported a greenbul caught at Baraton 38 km SW of Eldoret, on 14 Desember 1983, to be a Zanzibar Sombre Greenbul After further study of the specimen, which is presently in the National Museum, Nairobi, I am sure that the identification was incorrect. I now believe the bird to be an atypical specimen of the Cameroon Sombre Greenbul

Larry Siemens, Department of Wildlife and Fisheries Biology, University of California, Davis, CA 95616-5270. U.S.A.

SOCIETY NOTICES

The following books have been donated by Academic Press to the Library at the close of the 7th Pan-African Ornithological Congress. The National Museums and the East Africa Natural History Society wish to express their thanks for this very generous gift.

1. *The Birds of Africa.*
2. *Ornithology in Laboratory and Field.*
3. *Acoustic Communication in Birds.* Vols. 1 & 2 By Donald E Kroodsma & Edward H. Miller.
4. *Birds: Their Structure and Function.* By A.S. King & J.Mslelland (2 Copies).
5. *Habitat Selection in Birds.* By Martin L. Cody.
6. *Bird Migration in Africa.* Vols. 1 7 2. By Kai Curry-Linahl.
7. *Avian Genetics. A population and Ecological Approach.* By F. Cooke & P.A. Buckley.
8. *Nomina Anatomica Avium.* By Julian J. Baumel.
9. *Biographies for Birdwatchers.* By Barbara and Richard Mearns.
10. *Avian Biology.* Vol. VIII. By Donald S. Farner, James R King & Kenneth C Parkes.
11. *The Atlantic Alcidae.* By David N. Nettleship & Tim R. Birkhead.
12. *The Ecology of Social Behaviour.* By C.N. Slobodchikoff.
13. *The Leishmaniases in Biology and Medicine.* Vols. 1 & 2. By W. Peters & R. Killick-Kendrick.
14. *Chemotherapy and Drug Resistance in Malaria.* Vol. 1 & 2. By W. Peters.
15. *The Natural History of Larval Mosquito Habitats.* By Marshall Laird.
16. *The Biology of Schistosomes from Genes to Latrines.* By David Rollinson & Andrew J.G. Simpson.

FUNCTIONS ORGANIZER

Our efficient and popular Functions Organizer, Mrs Dorri Brass is leaving shortly. So we are requesting volunteers to take over - would anyone willing to do so, please contact the Hon. Secretary, Mrs L. Depew, Box 44486, Nairobi.

Anyone who has a visitor staying at any time who would be prepared to give a talk to the Society, on any subject relating to Natural History from anywhere, also contact the Hon. Secretary, please.

The residual beneficiaries of Miss Priscilla Allen's Estate have donated the sum of KSh.10,000 to the East Africa Natural History Society.

The Society would like to express our thanks to them for this very generous donation.

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At the suggestion of Malcolm Ellis, there has been discussion as to an appropriate memorial to the late Tim Barnley to be placed at Swaiwa Swamp National Park. The wardens in charge of the Park, The East African Wildlife Society and the EANHS have all indicated interest in participating in the project.

Any suggestions from members would be very welcome, please write to the Hon. Secretary, Box 44486, Nairobi.

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Mrs Martina Muga, the former Hon. Secretary who misappropriated the Society's funds, was arrested and charged with "theft by a servant" by the Parklands Police on 17 August after the Chairman had reported the matter to them.

The Chairman supplied the police with the 1987 audited accounts of the Society in which it was reflected that well over KSh.20,000 had not been handed to the Society by Mrs Muga up to May 1988. She was therefore taken before the Kibera Magistrates Court on 18 August and committed to a jail sentence unless or until she could produce the money. Since she did not produce the missing money she was imprisoned.

John Kokwaro, Chairman EANHS.

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THE EAST AFRICA NATURAL HISTORY SOCIETY

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The Society publishes the Journal of the East Africa Natural History Society and National Museum. Eash issue consists of one paper; sometimes two or more short papers may be combined to form one number. Several may be published during one year. Contributions, typed in double spacing on one side of the paper, with wide margines, should be sent to the Secretary, Box 44486, Nairobi, Kenya. Authors receive twenty-five copies of their article free, provided that these are ordered at the time the proofs are returned.

EANHS BULLETIN

This is a duplicated magazine issued four times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (EANHS Bulletin), Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs cannot be published.

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The Ornithological Sub-committee publishes this bird journal five times a year, cost Kshs 100 per annum. All correspondence to D.A. Turner, Box 48019, Nairobi, Kenya.

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EANHS BULLETIN Volume 18 (4) DECEMBER 1988

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GENETIC ANALYSES OF THE EAST AFRICAN BOVIDAE

The roughly 115 species that comprise the family Bovidae represent one of the most spectacular of all mammalian radiations, and includes most of the domesticated animals on earth (cattle, sheep and goats) and over 70 wild species on the African continent. The ecology and behaviour of many of these species have been exhaustively studied, but almost nothing is known of the genetics of wild bovids, at either the population or evolutionary level. Genetic research on the taxonomic relationships among the various bovid species has been minimal compared to other groups like the canids and felids, for example. That such genetic analyses are needed is evident from the number of alternative anatomically based taxonomic classifications in existence, and the limited amount of information extractable from the available fossils. At the population level, it is important to realise that rather few large populations of big mammals remain in existence. Knowledge of the genetic structure of large mammal species has been based on North American and European species with a long history of human perturbation, and much can be learned by studying the African bovids. Our research at the National Museums has therefore focussed on two levels of analysis: the population, and the species and higher taxonomic groups.

To date, our analyses have been based on allozyme variation: detectable differences in the amino acid composition of enzymes. Since these differences are coded for by the nuclear DNA, this method represents an indirect way of estimating differences within DNA nucleotide sequences. In general, such differences among interbreeding groups are minimal, but become established among geographically, ecologically, or behaviourally isolated populations, and especially among reproductively isolated species. Since such differences tend to build up over time once reproductive isolation has been attained, the degree of relationship among species can be estimated by the amount of shared genetic similarity. Liver samples from 27 bovid species that were shot for trophies, venison, or that died in the St. Louis Zoo in the United States were screened for allozyme variation at 40 gene loci by using standard gel electrophoresis.

Relationships among these 27 species are shown in Figure 1. where species are grouped on the vertical axis according to their genetic affinities with each other. The degree of relatedness between pairs or groups of species is indicated on the horizontal axis where the branches between the species are joined by vertical lines. Thus, wildebeeste is related to hartebeeste at a level of 0.92, and the hippotragines to the alcelaphines at a level of 0.70. The least genetic similarity exists among giraffe and bovids (0.14): This split occurred over 20 million years ago, (in most analyses such as these, an "outgroup" such as the giraffe in this case is included to give the tree perspective).

There are naturally many consistencies when this genetically based tree is compared with previous classifications of the Bovidae. For example, it is not surprising that wildebeeste, hartebeeste and topi form a group, and the same applies to all the gazelles, reduncines, and the tragelaphines (although there has been much debate on whether hartebeeste are more closely related to topi or to wildebeeste, for example). More interesting than these agreements are the differences from the anatomical classifications, and one of the most striking pertains to impala. This species had previously been grouped with the alcelaphines, or the gazelles, or even with the reduncines. In fact, it appears that the impala represents one of the earliest branches on the bovid tree, and as a result, it has no close relatives. Also, the neotragines (a subfamily in which all the smaller antelopes such as suni, pygmy antelope, steinbok, oribi, klipspringer, dikdik etc., had been lumped) is composed of at least two genetically different branches: the klipspringers and dikdiks are suggested here to be more closely related to the gazelles than other neotragines such as suni.

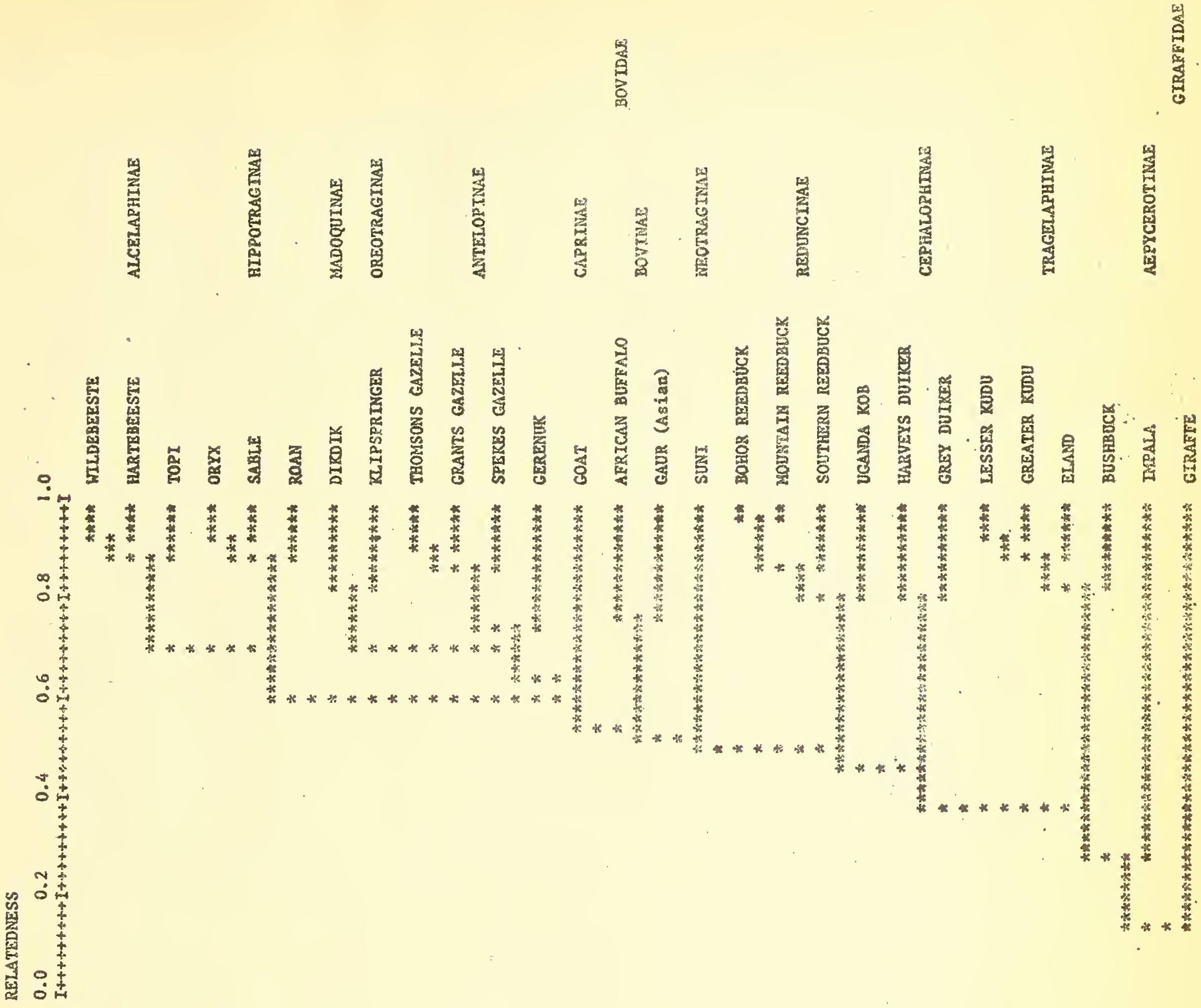
RELATEDNESS
0.0
0.2
0.4
0.6
0.8
1.0
WILDEBEESTE
HARTEBEESTE
ALCELAPHINAE
TOPI
ORYX
SABLE
HIPPOTRAGINAE
ROAN
DIKDIK
MADOQUINAE
KLIPSPRINGER
OREOTRAGINAE
THOMSONS GAZELLE
GRANTS GAZELLE
ANTELOPINAE
SPEKES GAZELLE
GERENUK
GOAT
CAPRINAE
AFRICAN BUFFALO
BOVINAE
BOVIDAE
GAUR (Asian)
SUNI
NEOTRAGINAE
BOHOR REEDBUCK
MOUNTAIN REEDBUCK
REDUNCINAE
SOUTHERN REEDBUCK
UGANDA KOB
HARVEYS DUIKER
CEPHALOPHINAE
GREY DUIKER
LESSER KUDU
GREATER KUDU
TRAGELAPHINAE
ELAND
BUSHBUCK
IMPALA
AEPYCEROTINAE
GIRAFFE
GIRAFFIDAE

Figure 1

The other significant contribution this species level analysis make is in depicting how subfamilies are related to each other, and again there are both similarities and differences with previous anatomical assessments. In terms of similarities, this analysis confirms the relationships among cephalophines (duikers), reduncines, and some of the neotragines. However, it proposes a relatively close relationship among alcelaphines and hippotragines, places the caprines (sheep and goats) basal to those subfamilies and the gazelles, and identifies the tragelaphines as one of the earliest branches in the family.

At the population level, our interest is in determining how genetic variability is distributed within a species. Generally, a species is composed of a variety of more or less distinct populations maintained by minimal interbreeding. Therefore, genetic variability is usually distributed across populations, and surveys over the species' geographic range are required to obtain good estimates of how genetic resources are distributed. For our initial surveys we chose to focus on wildebeests: a large, wide-ranging species for which several morphological races had been described. While the work is still in progress, the early results are intriguing: populations on either side of the Rift Valley are genetically as distinct as species of deer, for example and the Serengeti migrant population exhibits sufficient genetic difference from one of the nearby resident populations to suggest they are non-interbreeding units.

These kinds of results obviously contribute much to the understanding of bovid evolution and genetics, but also have applications for conservation, management and veterinary studies. In terms of conservation programmes, the ultimate goal should be to preserve as much genetic diversity as possible. In that regard, our results already make it essential to maintain wildebeeste populations on both sides of the Rift Valley, and we should in the future be able to contribute considerable information to the design of informed management programmes. Any study that determines genetic relationships among species has an obvious value for disease research: viruses that affect the alcelaphines have a good possibility of also affecting the hippotragines, for example. But one of the most important contributions this study can make is to point out two things: first, that the Bovidae have attained a remarkable diversity in eastern Africa. And second, that in spite of this diversity of well-adapted bovids, enormous sums of money are spent on maintaining three ecologically destructive, disease susceptible, imported bovid species in a hostile environment to do what the African species do much better: convert vegetation into protein.

ACKNOWLEDGEMENTS:

The samples necessary for this study could not have been collected without the assistance of the professional hunting fraternity in Tanzania, the Uganda National Parks, the St. Louis Zoo, Mr David Hopcraft and Dr John Richardson.

Peter Kat, National Museums of Kenya, Box 40658, Nairobi.

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SILVERY-CHEEKED HORNBILLS ATTACKING NESTS

I live in Kibagare Valley, Nairobi, which runs parallel to the Lower Kabete Road and it is a very good area for birds. Silvery-cheeked Hornbills are present for most of the year in small groups of about six birds, but are usually absent from September through to December/January.

On 11 August 1988 at 4.30 p.m. one hornbill (a large male) took up position in a gum tree at the edge of the garden and proceeded to "call", other hornbills could be heard in the area in what appeared to be their usual small groups.

The calling of this first bird disturbed the kites which were nesting in a jacaranda tree in the garden and one of the kites proceeded to "bomb" the hornbill.

Over a period of approximately 15 minutes other hornbills arrived and I counted over 19. This large group of hornbills then moved in on the kite's nest and proceeded to worry the sitting kite as would a pack of hyaena; a couple of hornbills hopped along the branches to the nest and as they were driven off by one of the kites, others would then go for the nest. All the hornbills, even though not actually attacking the nest, went in for a lot of bill clashing with each other and were calling, a different noise from their usual bray - a much softer sound.

The first hornbill took no part in these activities and continued to call throughout the 40 minutes or so that the harassment of the kites went on. Eventually the kites left their nest but continued to attack the hornbills.

Within about 10 metres of the nest tree is a fig tree which was in full fruit, but the hornbills though landing in it, did not eat any of the fruit. I have seen them feed on these figs at other times of the year.

Eventually the first hornbill left the gum tree and moved off down the valley - still calling - and the other birds gradually left the garden and followed it.

12 August: During the course of the day the kites worked to repair their damaged nest. Then at approximately 4.15 p.m. the hornbills appeared in the garden, following the same pattern as the previous day, even to the one hornbill arriving first, perching in the gum tree and calling. This time I counted over 35 birds.

Initially their behaviour was identical to the previous day, but the kites soon abandoned any defence of their nest and flew away. The hornbills then completely destroyed what remained of the kite's nest. There appeared to be tugs-of-war between the hornbills over the sticks from the nest.

The hornbills then turned their attention to other trees in the garden which are covered in a species of *Loranthus*. There were a number of nests in this *Loranthus* of various species of birds e.g. Olive Thrush, Red-eyed Dove etc. The hornbills raided just about every nest I knew about. I saw one of them enter a clump of *Loranthus* twice and each time re-appear with a nestling which it tossed down its bill as it would a fig. The hornbills stayed for approximately 50 minutes and worked their way through the trees looking for and destroying nests, sometimes fighting each other to get at a nest.

I heard and saw the hornbills in the area afterwards but always in small groups.

Mary Sinclair, Box 30158, Nairobi.

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WORM SNAKES FED ON FLEA LARVAE

In May 1987, I acquired a relatively large Jan's Worm Snake *Leptotyphlops conjuncta*. At first an attempt was made to feed it on termites of the genus *Microtermes* but it would not eat them. It also appeared to refuse to eat small ants. As it was losing condition, I was preparing to release it when I saw a short note "Airlifted snakes keep house for owls" (*New Scientist* 1987 114 (1557): 27) about a study of worm snakes living in owl's nests. These snakes must have been feeding on the parasites and soft insect larvae in the material of the nests. In fact, the point of the note was that the owls were bringing the snakes to their nests to keep them free of parasites since there were marks on the snakes consistent with them having been carried by the owls.

It seemed worth a try to see if the snake I had would eat flea larvae, and these I could obtain in abundance from my cats. It appeared that the snake was indeed eating the larvae as very few were seen to pupate and the snake was kept in a terrarium in which there was no access to any other food items throughout the whole period. Another sign that it was eating was that it gained condition and shed its skin twice during the time I had it. It died in January of 1988 at which time it was 164 mm long and had a mid-body diameter of 3 mm. I believe there had been some reduction in its size just before it died.

I kept a record of the movements it made during the time that I had it and it appeared to be active at night as it had frequently moved its position when observed from day to day. The only time it was active during the day was when fresh water was added to its bowl, which it would often investigate immediately, and two other times when other worm snakes were put into its terrarium. These it investigated but otherwise ignored. Both of the other snakes had been injured by cats and both died within a week of capture.

Lorna Depew, Box 44486, Nairobi.

UNKNOWN FORESTS No. 2 : TIATI HILL FOREST

Tiati is situated in northern Baringo District at 01° 19'N, 35°56'E, and it rises to 2300m. The approach is by way of Kito Pass (on the Nginyang - Tot road) and the "Freedom from Hunger" track which turns off north a bit after the pass. A 4WD vehicle is strongly advised.

Tiati is surrounded by *Acacia mellifera - A. brevipes - Terminalia spinosa* bushland: hot, spiny and full of flies. The lower slopes grade from this bushland, via semi-evergreen bushland (with *Dalbergia*), into wooded bush/grassland with *Combretum molle, Pappea capensis, Steganotaenia, Carissa, Ficus glumosa* (on rock outcrops) and *Protea gaguedi*. After a long (5 - 6 hours), hot and extremely dry walk upwards one reaches the forest - stretching from 2200 - 2300 m. The commonest trees are *Croton megalocarpus, Dombeya goetzenii* and *Teclea simplicifolia*; frequent are *Ochna insculpta, Olea europaea* var. *africana, Mystroxylon aethiopicum, Trichocladus ellipticus* and *Rhus natalensis*. Less common are *Albizia gummifera, Ficus thonningii, Nuxia congesta, Gnidia subcordata, Ekebergia capensis, Psychotria kirkii, Chionanthus battiscombei* (near drainage lines) and *Dracaena steudneri*.

Ground cover is about 20% and consists mainly of *Acanthaceae*: when I was there it had not rained for over three months, and so none of these was in flower, and I was unable to identify them. Epiphytes were rather rare: I saw *Peperomia abyssinica* and *Rangaeris amaniensis*.

This forest covers *ca*. 75 ha on the western side of the summit knoll; on the eastern side there is also a patch of forest, on west-facing slopes. This eastern patch seems rather disturbed, with many gaps, and paths leading to it; whereas the western patch, which I visited, is difficult to reach and in consequence almost undisturbed.

The forest can be classified as marginal Croton forest, and owes its existence to cloud. I believe I was the first botanist ever to visit it; certainly it does not figure on any list of forests I have seen, either of KREMO or of the forest department.

Henk Beentje, East African Herbarium, Box 45166, Nairobi.

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THE WWF REGIONAL OFFICE FOR EASTERN AFRICA

The World Wide Fund for Nature - formerly known as the World Wildlife Fund - has always had a close association with conservation in East Africa. In fact, it was the concern of a few individuals, notably the late Sir Julian Huxley, over the future of East Africa's spectacular wildlife which led to the formation of WWF in 1961. Over the past quarter century, WWF has grown to become the largest private conservation organisation in the world, with 26 National Affiliates raising funds for conservation all over the world. Since 1984, WWF has maintained a separate Regional Office for Eastern Africa, based in Nairobi. The Regional Office is responsible for developing, initiating and overseeing WWF activities in eight countries: Kenya, Uganda, Tanzania, Ethiopia, eastern Zaire, Rwanda, Burundi and Djibouti. WWF works closely with the governments of the region, as well as with aid agencies and local environmental NGO's.

Currently, WWF has over 40 projects in the region. The projects can be divided into four main categories: saving threatened and endangered species; saving threatened wildlife habitats and ecosystems; support for existing conservation areas such as Parks and Reserves; and education. WWF support for the Region's project approached 1 million Swiss Francs in 1988.

Within Eastern Africa, WWF supports research and conservation action on the following threatened and endangered species: black rhino; northern white rhino; elephant; Tana River mangabey and Tana River red colobus; wild (hunting) dog; and mountain gorilla. The plight of rhino and elephant will be well known to readers of this article. WWF is funding research into the behaviour, ecology and status (numbers) of these animals and in the case of the black rhino has assisted in several ways in the setting up of sanctuaries in Kenya. There will be a major effort in the coming months to assist regional Governments to stop ivory poaching and the illegal ivory trade, using funds from WWF National Affiliates throughout the world, the EEC and the US Government. The small remnant population of northern white rhino in Garamba National Park, Zaire is being closely monitored and assistance given to the Zaire Government to protect it. The results of a recently completed study of the Tana River mangabeys and red colobus will help formulate recommendations to save these rare primates and their dwindling habitat. WWF is also involved in gorilla conservation in Rwanda, Zaire and the Impenetrable Forest, SW Uganda.

Of course, saving species also involves saving their habitats. Several projects of this nature are in progress in the region including initiatives to save forests in Uganda, Tanzania and the coastal area of Kenya; studies on the status of coral reefs and monitoring of the Serengeti-Mara ecosystem.

Support for existing Parks and Reserves has always been high on the WWF Agenda. A major success was the purchase in the 1970's of land south of Lake Nakuru which increased the area of the Park by more than 50%. More recently, WWF has provided support in the form of vehicles and other equipment such as radios, uniforms and staff housing to several Parks and Reserves including Bale Mts., Ethiopia, Masai Mara, Kenya (with funds from Friends of the Masai Mara), Meru Park, Kenya (with funds from the Dulverton Trust), Garamba National Park, Zaire and Selous Game Reserve, Tanzania.

Education is an extremely important part of WWF's conservation effort. Funds and equipment have been provided to Wildlife Clubs in Kenya, Sudan, Tanzania and Uganda. Support for the College of African Wildlife Management at Mweka, Tanzania has been continuous since its founding in 1963 and recently, WWF set up a scholarship fund to finance wildlife trainees from all over Africa at the College. Eight WWF scholars have now completed the diploma or certificate courses through this programme. In addition, WWF occasionally provides funds to enable African wilflife ecologists to attend courses, seminars and conferences overseas.

For further information on WWF, please contact the Regional Office, Box 62440, Nairobi. The offices are located in Embassy House, Harambee Ave.

Alison Wilson, Box 62440, Nairobi.

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REVIEW

FLORA OF TROPICAL EAST AFRICA
Rubiaceae Part 2. By D. Bridson & B. Verdcourt. Price £25 or Ksh.625.
Euphorbiaceae Part 2. By S. Carter & A.R. Smith. Price £18 or Ksh.400.
Dichapetalaceae. By F.J. Breteler. Price £3 or Ksh.75.
Burmanniaceae. By E.J. Cowley. Price £2.25 or Ksh.55.
Published on behalf of the East African Governments by A.A. Balkema, P.O. Box 1675, Rotterdam, Netherlands. Orders direct to the publisher will not be charged for postage, if the remittance (by Sterling £ cheque) is enclosed. In the near future, these parts will also be available from the E.A. Herbarium, National Museums of Kenya.

In the *EANHS Bulletin* Vol.18 (2) May 1988 I wrote a review for *Euphorbiaceae* Part 1; now just three months later, part 2. of this family has been published. This means that at long last we have a complete and very authoritative treatment for the whole family. Genera treated in Part 2 are, among others, *Antidesma* and the (semi) succulent genera *Synadenium* and *Monadenium*. This last genus is represented by 39 species in East Africa, of which 11 are endemic to Kenya.

But the most important genus in this volume is *Euphorbia* itself, with the amazing number of 160 species, illustrated with 24 full page drawings by Christine Grey-Wilson; these illustrations are of very high quality, and all are originals.

Mrs Carter, who deals with the genus, is the world expert on East African *Euphorbia*, and she is especially interested in the succulent species. The subgenus *Euphorbia*, with 85 species, comprises all the succulent species; these range from the tiny *E. actinoclada*, less than 5 cm high, to the giant trees like *E. candelabrum* and *E. nyikae*.

For many horticulturists, succulent-lovers and amateur as well as professional botanists, this treatment will be very welcome; in fact it is the first one ever to group all *Euphorbias* together with proper keys to identify them. The keys are good ones, although flowering material is often essential for identification. Twenty six species are endemic to Kenya, and over half of these are restricted to small areas: for example *E. classenii* to Mt. Kasigau, *E. baioensis* to Baio Mt., *E. cuprispinosa* to Mt. Nyiru. Many of these are endangered, both because of their restricted range and overcollecting by succulent collectors. This volume will surely give an impetus to field botanists to study these species, hitherto nearly impossible to identify, and so contribute to distribution data and field knowledge.

The second volume of *Rubiaceae* has also been eagerly awaited, not least because of the revised key to the genera which starts off this volume. Forty eight genera are treated, among them such large and important ones as *Coffea, Gardenia, Ixora, Mussaenda, Oxyanthus, Pavetta, Rothmannia, Tarenna* and *Tricalysia*. Many of these genera have been the bane of field botanists, both amateur and professional, in the region; personally I have sometimes hesitated to collect species of *Pavetta* or *Tarenna*, knowing that it would take me ages to identify them - and even then, doubts would remain.... And though I cannot say that these genera have been made easy, at least they have been made possible!

Seventy full page illustrations are included, but they vary as regards quality. Mrs Bridson herself illustrates many of the species accurately, and I am an ardent admirer of the plates by Mrs Church - the same Mrs Church who did many of the illustrations in the original *Kenya Trees and Shrubs* (1961)! But the two other illustrators draw with rather heavy lines, their plates come out very dark, and I for one cannot see any reason why leaves should be shaded along the veins. But all in all, this Part 2 is a very welcome addition to the Flora series; we now eagerly await Part 3, which will be the final one, with the dreaded *Canthium* group and *Vangueria*.

Dichapetalaceae is a much smaller family. Sixteen species of *Dichapetalum* and one species of *Tapura* occur in East Africa; these are shrubs or lianas, in Kenya best represented on the Coast. I do like the illustrations very much, but I might be biased, since my wife did half of them....

Burmanniaceae are small saprophytic herbs, closely related to the orchids. Five species occur in East Africa, the only Kenyan one being *Gymnosiphon usambaricus*, which is very rare in the Taita Hills. When I first saw this species there I was flummoxed! They lack all chlorophyll, and look rather ghostly among the leaf litter. However, they do have a weird beauty of their own.

My only criticism on these four volumes is on the illustrations; apart from the aforementioned dark drawings in *Rubiaceae* the numbered details of flowers and fruits are scattered around the plate in a very haphazard way. A very minor criticism, however, on these worthwhile volumes. They are expensive, but to my mind they are more than worth it. For sheer professionalism there is nothing to beat them, in Africa or anywhere else.

H.J. Beentje.

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LETTER TO THE EDITOR

Dear Sir,

To receive no "feedback" from Life Members must be disheartening for your volunteers and yourself when packing the *Bulletin* and *Journals* to send out.

Let me assure you that they are received and read with great interest by this family of Life Members and passed on to other ex Kenya people, living in Western Australia, who are interested in Natural History and wildlife.

My wife and I are most grateful to you for sending them. Thank you all. It may be of interest to learn that the last two issues arrived in an unsealed envelope post stamped in Nairobi on 17 December 1987 and reached here on 28 September 1988! It must be a record? Anyway, they were most interesting.

Here in W.A. we belong to the W.A. Natural History Club and have monthly lectures and field trips very much the same as the E.A.N.H.S.

Birds here are not nearly so numerous as in Kenya, but they are interesting and there are many endemics. On a good day it is possible to see 120 species within 50 km of Perth.

Flowers are fantastic and nearly all endemic. This weekend we identified 34 different species of ground orchids alone.

Please pass on our best wishes to any of your older members who might remember us. Our house is always open to any of your members who visit W.A.

We wish the E.A.N.H.S. prosperity in the future. Keep up the good work, we do enjoy the *Bulletin*.

John and Helen Start, 2 Alice Road, Roleystone, Western Australia, 6111.

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THANKS

Judith Rudnai wishes to thank all those who sent information about lions in Nairobi National Park.

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SCOPUS:

The Ornithological Sub-Committee publishes this bird journal five times a year, cost Kshs.100 per annum. All correspondence to D.A. Turner, P.O. Box 48019, Nairobi, Kenya.

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EANHS BULLETIN Volume 19 (1) MARCH 1989

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THE AFFINITIES OF THE CHINSPOT "FLYCATCHERS"

The Chinspots *Batis* and their relatives the Wattle-eyes *Platysteira* are usually considered to be Flycatchers like those of Eurasia and the rest of Africa. This is mainly because they have the habit of perching upright on branches, flying out to catch insects in the air, and returning to the same or a nearby branch ("flycatching" *par excellence*).

However, some other African birds have this same habit, such as the Trogons, Bee-eaters and Drongos, as do other groups of birds in different parts of the world. The Chinspots and Wattle-eyes also have long hairs at the base of their bills which probably help them to aim their beaks correctly at the moment of catching an insect. However, this adaptation is also found in Trogons, Drongos, Shrikes, Nightjars and other birds.

Lastly, these two "flycatchers" have short tails like some of the true Flycatchers (such as the Dusky Flycatcher) but unlike the afore-mentioned insect-eaters. If they are true Flycatchers, they are the only ones to possess orange-yellow eyes and a Shrike-like Black and white wing pattern (only some species). Also, the Chinspots are sometimes called Puffback Flycatchers because "the ample plumage of the back can be erected to look like a ball of wool" (Grzimek, 1973. p.277.). This is a curious condition otherwise found only in some Shrikes (for example Puffback Shrikes).

The most sophisticated studies on bird relationships - analysis of DNA-DNA hybridization - show that both Chinspots and Wattle-eyes are most closely related to Helmet Shrikes and Bush-Shrikes and very unrelated to Flycatchers (Sibley *et al*. 1988). If this is true, the eye colour, wing-pattern and "puffback" would clearly be explained. Insect eating and hairs at the base of the bill are already possessed by Shrikes. The largest innovation for the Shrike bloodline would be the occasional "flycatching" sallies, clearly a habit that has been adopted by many insect-eating birds (including Drongos, which are also related to Shrikes).

The hypothesis that the Chinspots and Wattle-eyes are really Shrikes can be verified (or rejected) in a very simple way: if they are Shrikes, the thigh bone (humerus) should resemble that of Shrikes, Crows, Drongos and Orioles; if they are Flycatchers, the thigh bone should look that of Flycatchers, Thrushes, Starlings, Tits, Swallows, Greenbuls, Weavers, Waxbills and warblers. (Technically, there is a single, pneumatic tricipital fossa of the humerus in Shrikes etc. and two, non-pneumatic tricipital fossae in Flycatchers etc.).

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Sibley, C.G., Ahlquist, J.E., & Monroe Jr., B.L. 1988. A Classification of the Living birds of the World Based on DNA-DNA hybridization Studies. *The Auk* 105: 409-423.

Hector Gomez de Silva, Xola 314-E, 03100 - Mexico, D.F.

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OBSERVATIONS ON SOME NESTING HABITS OF THREE BIRDS IN MOSHI, TANZANIA

During the month of April 1987, several birds nested in my family's garden on the southern foothills of Mount Kilimanjaro. I observed and noted some behavioural aspects of each of the three respective species: Red-cheeked Cordon-bleu *Uraeginthus bengalus*, Brown-breasted Barbet *Lybius melanopterus* and the Paradise Flycatcher *Terpsiphone viridis*. Below is a brief description of all that was recorded.

RED-CHEEKED CORDON-BLEU On the 21 April a pair of Red-cheekd Cordon-bleu began to survey the nest of a Spectacled Weaver *Ploceus ocularis* that had been constructed on a *Phoenix* tree. However, approximately three weeks prior to this 'survey' the same couple (I believe), had fought with an chased the male Spectaled Weaver away - following the completion of the nest. Three weeks went by with no indication that the nest was being occupied by either species.

The victorius pair suddenly returned to the nest on 21 April. Whilst the female remained inside the nest, the male would repeatedly fly in and out on a quest for grass. The male carefully selected soft, long and dry grass strands. He would cut them by holding them tightly in his beak (almost at the base of a clump of grass) and jerk his body backwards until he gathered a sufficient beakful. Then he flew and perched on a branch adjacent to the nest, looked around first and then tried to adjust the grass in his beak by pushing them against the branch (sometimes losing several if not all the strands in the process).

He entered the nest for a few seconds, deposited the grass and flew out to rest above the nest before departing on his errands. The female, in the meantime, appeared to be 'fixing' and shaping the nest inside with the newly fetched grass.

On the third day (23 April 1987) I did a full 12 hour observation and found that the pair would both leave their nesting duties at varying periods. They would work together for about 20 - 35 minutes and then fly off (presumably to feed) only to return after approximately 45 - 70 minutes.

The fourth, fifth and sixth days had very little activity. The birds had come and gone about three times (once or twice in the morning hours and at least once during the evening) and the male collected grass on each visit. They had probably almost completed the 'repairs'.

From the 27th onwards there was no indication that the birds were to return. Although there were a pair of Red-cheeked Cordon-bleu in the compound (they might have been the same couple) they never approached the nest. For some reason the nest was abandoned and was never used in the months that followed.

BROWN-BREASTED BARBET Some time had passed before I had noticed a couple of young barbets (of the same age) that peeked out of a small hole in a dead branch of a wild fig tree. After about a month only one chick came out and the other was presumably dead. On 19 April 1987, the juvenile began to receive its flying lessons. Its parents were in the company of a third member which seemed to be much older than the chick because of the overall appearance of its feathers. The older of the two juveniles was not fed by the parents whereas the youngest was constantly given attention and food. In the late evenings the youngest offspring would cry out and one of the parents would fly over and nudge the sibling back into the hole, following it from behind. Later the remaining two barbets followed. It is interesting that the parents were accompanied by a third party, one that might have been an older offspring. (Also note that Praed & Grant record the breeding of this species - "Mt. Kilimanjaro foothills, February.").

PARADISE FLYCATCHER A pair of resident Paradise Flycatchers had begun to build their nest about a week before I started to note their behaviour patterns on 22 April 1987. They built the nest on a forked branch of a mango tree well above the reach of a person's outstretched hand. Both the female and the male helped each other in the construction process on an alternate basis. Each bird would sit in the nest and build around their bodies so that the characteristic dome-shape was achieved. Some of the materials used included spider and cob webs, mud, sand from termite 'routes', lichens, and mosses. The materials were collected in the beak as the individual hovered over the source. It later flew to a branch where it condensed and compacted the material by rubbing its beak and contents against a branch. On the 25th the nest appeared to be completed and the female began to sit in it. I noted that neither of the birds used the nest at night during the construction but instead roosted on a nearby branch.

I did not manage to record some of this pair's breeding achievements as I was away from the area for about a month. However, when I got back there were two chicks in the nest. When the chicks were about half the size of an adult, one fell from the nest and died. I have noticed this to be the case on about three out of five occasions when this species has nested in the garden.

Apparently, the nest is built for one fledgeling only because when the chicks develop they begin to compete for space and food. Eventually the smaller of the two is shoved off the nest, usually about a week or a week and a half before the survivor is taught to fly. On the basis of general observations it is common to see one juvenile being "weaned" rather than two although there are usually two chicks per nest initially.

Unfortunately I do not have any dates recorded during the several weeks of parental guidance and teaching. There is another interesting habit that I observed - from the time that the chicks were hatched through to the the fledging and 'flying lesson period' the parents used to swoop down at our dog (who is as big as an Alsatian) whenever he was under their nest. They obviously found him a threat and would fly at him and sometimes even touch him, screeching loudly throughout the commotion. He used to try and grab them in his jaws but they were too agile and slick for him. I found it quite interesting that such a small bird would attempt to scare away such a large 'predator' and even dare to fly as close as touching distance.

Norbert Cordeiro, P.O. Box 0377, Hampshire College, Amherst. MA 01002 USA.

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BABOONS DESTROYING A NESTING COLONY OF PETRONIAS

In Meru National Park about 3k from Leopard Rock Lodge toward the Kiolu River, my wife and I saw at noon on 18 December, 1988, a fig tree full of Olive Baboons *Papio anubis*. Counting revealed about 50 individuals, of which around 20% were youngsters. The tree had a great number of nests built by the Yellow-spotted Petronia *Petronia pyrgita* on the branches of the tree. The Petronia probably already had eggs and young because the baboon youngsters were moving from one cluster of nests to another taking something out of the nests and shoving it into their mouths. The older baboons were not plundering the nests. About five Red-billed Buffalo Weavers *Bubalornis niger* hung around the young baboons trying to chase them away from the colony. The weavers evidently nested in the same tree too. The Petronias were perching in the bushes near the tree containing their colony behaving in a strikingly inactive way. Mostly they preened their plumage or slept, which can be considered as substitute behaviour which protects the victimized individuals (Morris 1970 and Salo & Soikkeli 1983).

The baboons remained in the tree until they had destroyed almost the whole mixed nesting colony of Yellow-spotted Petronias and Red-billed Buffalo Weavers.

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Salo, J & Soikkeli, M. 1983. *Elainten kayttaytyminen (The Animal Behaviour)*. Helsinki: Otava.

Eero Antikainen, University of Eastern Africa, Box 2500, Eldoret.

AN INTERSPECIFIC ATTEMPT TO RESUSCITATE A RING-NECKED DOVE

The following incident happened on 16 December, 1988 at about 18.30h at Meru Mulika Lodge in Meru National Park. A Ring-necked Dove *Streptopelia capicola* was sitting in an *Acacia* tree at a height of about three metres above the ground near the wall of one of the Lodge huts. Right when I chanced to step outside from indoors, the bird fell to the ground like a stone. The thump aroused my attention. Staying nearby, I used my binoculars to see what happened to the dove. The bird lay on its side moving its legs and neck. At the same time five White-headed Buffalo Weavers *Dinemellia dinemelli* gathered round the dove. Some of them touched its head and some its beak behaving as if they were trying to resuscitate the victim e.g. by feeding and calling it. When I approached the dove some minutes later, the bird was dead. No injury was visible on the dead bird, which was an adult.

It might be possible that the Buffalo Weavers, as members of the same quite compact bird community round the Lodge compound, recognised the dying dove and tried to help it. Personally I have recorded similar behaviour in cage birds (pets) as well as in some northern European wild passerines (see e.g. Welty, J.C. 1964. *The Life of Birds*. Philadelphia-London).

Eero Antikainen, University of Eastern Africa, Box 2500, Eldoret.

UNKNOWN FORESTS OF KENYA No. 3 : EMINIT FOREST

Location: Turkana District, Murua Ngisigerr Hill 60 km W of Lodwar.
Size: 3.965 hectare (almost 40 square kilometres) Status: ungazetted, county council trustland.

At the beginning of December 1988 I visited Eminit Forest on Murua Ngisigerr; for official permission to carry out a survey of the forest I am grateful to Mr Chepkwony, District Commissioner of Turkana District.

This is one of the toughest mountains I have ever been on. For the infliction of exhaustion and parched throats it is hard to beat, and only Tiati Mountain approaches the grind of going up! Murua Ngisigerr rises steeply from the surrounding plains to an altitude os 2 100m. The approach is by driving through trackless bush from Lodwar, the route up the mountain is by cattle track, which means bending over most of the time and being snagged by the ubiquitous thornscrub. It is a long, hard slog upwards, some six hours from the foot of the mountain.

The lower slopes are covered with bushland, grading into woodland and semi-evergreen bushland as one approaches the forest, which starts at about 1 750m. These lower parts of the forest are dominated by *Juniperus procera, Olea europaea* and *Pistacia aethiopica*. The forest proper is vast and covers most of the plateau. The canopy dominants are *J. procera, O. europaea* var. *africana*; *O. capensis, Teclea nobilis* and *Podocarpus falcatus* are common; *Cassipourea malosana, Ekebergia capensis, Ficus thonningii, Schrebera alata, Cussonia holstii* *Nuxia congesta* are less frequent. In the smaller tree layer *Teclea simplicifolia* predominates, with *Vangueria apiculata, Pistacia aethiopica* and *Maytenus heterophylla* as common associates. Common shrubs are *Orthosiphon hildebrandtii* and *Abutilon longicuspe*; common climbers are *Jasminum floribundum* and *Toddalia asiatica*, with the occasional *Pterolobium stellatum*. On the cliff edge *Tarchonanthus camphoratus* is common. Within the forest common herbs are *Phaulopsis imbricata, Thunbergia alata, Achyranthes aspera, Pentas lanceolata, Torilis arvensis, Caucalis incognita*; the grass *Panicum monticola* is everywhere. Common epiphytes are *Peperomia abyssinica, Pleopeltis macrocarpa*, and the orchid *Rangaeris amaniensis*.

New finds for Turkana District/K2 were *Asparagus setaceus, Geranium ocellatum* and *Bothriocline altimontanum*; a pendant species of *Aloe* on the cliff face I consider to be new to science, and I intend to describe it as *Aloe powysii*, after one of my companions on the safari.

Animals were rare in the forest: apart from the butterflies, especially *Papilio phorcas*, which was common, we hardly saw any at all; the occasional Hartlaub's Turaco made itself heard and seen, and we heard dawn and evening bird choruses. A single duiker was seen, and there were reports of a single female elephant, which sounds tragic to me.....

Generally the forest is in excellent shape, with regeneration of all major components. Despite the remoteness and the arduous ascent (not to mention the descent!) it is an amazing place, with fantastic views over the plains of Turkana. Recommended!

H.J. Beentje, East African Herbarium, Box 40658, Nairobi.

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REVIEW

MACROLICHENS OF EAST AFRICA. By T.D.V. Swinscow and H. Krog, 1988. London: Natural History Museum Publications. (Cromwell Road, London SW7 5BD). pp. 390, 185 Black & White figures, 16 Colour plates. Price £20.00.

Lichens, those fascinating symbioses of fungi and algae, have long been a neglected group in most parts of the world. More recently, they have proven to be a valuable tool in air pollution monitoring, being sensitive indicators. For East Africa they are still virtually unknown. That is, up to now. Because of a lack of literature this has been a daunting group. This book removes the difficulty of lack of information.

Grouped together in one volume are all 613 species of East African macrolichens, with keys to their identification, descriptions of genera and species, details of chemistry, ecology and distribution. The area covered comprises Kenya, Uganda, Northeast Tanzania and the highlands of southern Ethiopia.

Lichens occur mainly in the moister parts of this area, such as the coast, riverine habitats, and upland and montane habitats. A brief survey treats these habitats, listing the common and more conspicuous species. Then follow the keys, full of specialized terms such as isidia, apothecia and paraplectenchymatous; these terms are explained in a glossary, which might have been improved with some illustrations. At the end of the book a survey is given of the proper ways of studying specimens: macroscopic, microscopic, chemical, by UV light, and (optionally!) by thin-layer chromatography.

But the bulk of the book is occupied by descriptions of the species, with notes on ecology and distribution - both in East Africa and outside of this area. 185 illustrations, nearly all photographs, provide a valuable reference. The largest genera treated are *Parmotrema* (75 species), *Cladonia* (45 species) and *Usnea*, the well-known old man's beard (41 species).

For the lichenologist with an interest in East Africa, this book is obligatory, and he or she will see this as an invaluable work, indeed a *magnum opus*. For the East African with an interest in lichenology, this interest will have to be supported with some study of terminology, as well as with a microscope and some knowledge of basic chemistry. It is to be hoped that this book will be an aide to some baseline studies. If, in the future, lichens will be used to monitor air pollution in East Africa, now is the time to lay the groundwork for this monitoring. A study of present-day distribution of lichen species is necessary to be able to monitor changes in distribution patterns in the future. This book has made all this possible; it is be hoped that people will use it for this purpose.

K.H. Beentje.

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RUFIJI RIVER RAFTING TRIP - DECEMBER 1988

A rafting/camping trip down a large river is an enjoyable if rather exhausting way of experiencing a wilderness area.

Sobek Expeditions organise ten day safaris along a remote 130 km stretch of the Rufiji River in the Selous Game Reserve of Tanzania. Two to five hours of paddling the inflatable rafts per day leaves time for cautiously exploring the vicinity of each lunch spot and campsite on foot.

Last December's safari was intended to cater for clientele with a special interest in birds and this report deals mainly with that subject. Over the ten days 175 species were seen. However, such was the nature of our mode of transport that other large animals and reptiles demand attention first.

Hippos have never doubted their superiority over all other living things in their watery habitat. The appearance of small inflatable rafts in their territory does nothing to make them think differently, and even the most ardent animal lover would find it hard to sustain a liking for these creatures after one day on the Rufiji. A count the previous year had revealed a population of approximately three thousand on this stretch of the river. We saw several groups numbering over fifty. A zig-zag course to avoid the hippos as much as possible is therefore a necessity, and this increases the distance to be paddled threefold. Even so, a number of alarmingly close encounters are inevitable.

Crocodiles do not present such a danger when paddling (although one must, of course, be careful of them when walking near the water's edge and the sight of several near the white water rapids was a bit alarming!).
We apparently caught the 'tail end' of the crocodile hatching in this area as we saw several 'creches' of young (who were about 30 cm long). One group consisted of over seventy individuals. The young are capable of making a strident squeak with which they can presumably attract the attention of the mother. The remains of their shells lay on the sandy shores.

In contrast to the crocodiles very few young hippos were seen. We saw several examples of aggression between males (and heard some very unusual noises) suggesting that our visit coincided with the mating season. This is born out by sightings of many young animals on a previous rafting trip in July 1987, as the gestation period for hippos is approximately 233 days.

We knew that over half the Selous elephants had been poached in the past ten years and our guide told us that he saw fewer and fewer elephants each year. We were not expecting to see elephants in abundance and were very pleased to see four family groups during the trip. Interestingly, each group contained tuskless females. In fact from our very small sample size we estimated that 20% of the elephants we saw were tuskless, indicating intense poaching pressure on the tusked animals.

Although vigorous paddling is sometimes demanding, much birding can be done from boats. The main bird of the riverbank is undoubtedly the White-headed Plover. Considering that it seems well able to utilise sandy or rocky shorelines it is surprising that it is absent from most of East Africa. However, on the Rufiji it is hardly ever out of sight (or hearing!).
The only other bird which approaches it in abundance on the riverbank is the Water Thicknee.

Goliath Herons and Yellow-billed Storks were prominent throughout the trip and large groups of Openbilled Storks were commonly seen also. Where there were rocks in mid-stream they were often occupied by White-collared Pratincoles. Greenshanks and Common Sandpipers were present along the river, but the bank provides little suitable habitat for other small waders.

Pied and Malachite Kingfishers, with the occasional Giant, graced the riverside, but other kingfishers caused confusion. Were we seeing Mangrove Kingfishers far from the coast, or were they all Grey-headed?

The highspot of the birding from the boats for us was without doubt a single White-backed Night Heron. Evidently surprised as we silently crept close to the shore - attempting to pass a nearby group of sleeping hippos without attracting their attention - a good view by the whole party was possible before it disappeared in the riverine bush.

There were also, as anywhere perhaps, some surprising absences. Only one Blacksmith Plover was seen with a single small collection of Spurwing Plovers. This was in an area of flooded woodland where the river changed its course some years ago, which incidently provided a much more diverse collection of birds than elsewhere. Only two Marabou Storks, both soaring high, were seen on the whole trip which was puzzling when one remembers their fondness for baby crocodiles on the Nile.

Most birding was done while we were on shore. Black Cuckoos haunted us at every campsite (except one sandbar where there were no sizeable trees). Of course, we only actually saw them a few times. On the other hand, the Broad-billed Rollers were very common and conspicuous. We looked for the Racquet-tailed Roller but were unlucky. A Lead-coloured Flycatcher, which some time ago I had dismissed as a myth, was a real bonus at one of the lunch spots, as was also a Barred Owlet.

Bee-eaters were well in evidence with eight species recorded, although the 'southern' Carmine was not seen after the train journey into the Reserve. Boehm's Bee-eater is very common in the better woodland along the banks as was his Spinetail. Trumpeter and Crowned Hornbills were also characteristic of the area, but we searched in vain for the Pale-billed Hornbill. (Where is there a good picture?).

But perhaps the most rewarding birdwatching for me was at the end of the trip, near the Rufiji River Camp, when we visited Lakes Nzizimia and Siwondo by road. As well as adding additional bush species and the first Ruff and Tree Duck to our list, we were fortunate in seeing two unusual birds of prey. Careful examination of a rather plump goshawk sitting in Acacia woodland revealed it to be an Ovampo Sparrowhawk. Generally grey with a pink cere and legs, the brownish barring extended from throat to belly. A little further on, a grey falcon with very pointed wings, extending beyond the end of the tail when standing, was clearly a Sooty Falcon. A second view of a Dickinson's Kestrel, and an Osprey successfully fishing, completed an exciting and memorable trip.

If anyone would like further information on joining a rafting trip, please contact Conrad Hirsh, Box 59622, Nairobi.

Tony Potterton, Box 42994, Nairobi.

NOTE. A complete checklist is available from the above address.

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ONE EARLY MORNING IN NAIROBI NATIONAL PARK

I am always astonished when I hear people talk scathingly about Nairobi National Park. Apart from the illusions of distance and the liberating feeling of being far from the next representative of one's own species, Nairobi National Park is an excellent little park and one worth frequent visits. Its future, anyway in the present form may be bleak, but in October 1988 it was certainly, to use a cliche, teeming with game.

At 6.10 in the morning, the reception committee consisted of a lion and a lioness with three cubs, just one kilometre from the main gate, on the tarmac road. Around the Hyaena dam there were large numbers of zebra and many wildebeeste. There were eland in various areas. I think the eland population is still increasing as are the buffalo. Thompson's gazelle who have seemed to be on the decline appear to be recovering. There were, as always, rhino.

The birding was good. The lesser Kestrels had not yet arrived. The ostriches were 'in the pink'. The martial eagles were very tame and tolerated the motorcar. The crested francolins had chicks.

The unusual experience was to see a kite eating a small rat (or large mouse?), while circling low above us. It held the quarry in a foot (talon?), like a hobby would clutch a locust and kept tearing pieces of it, thus having an airborne meal.

Imre Loefler, Box 47964, Nairobi.

THE LIMURU SWAMP

Within very easy reach of Nairobi for a rewarding 'wetland' bird watch, we would like to recommend to readers of the *Bulletin*, 'the Limuru swamp'.

This is a very prominent 'vlei' enclosed by the road from Limuru township to the south and the main Nairobi to Nakuru road to the west, right where they meet at the second fly-over from Nairobi.

For years it has retained a central pool of water on which a small number of water birds were to be seen, whilst the 'vlei' was grazed. During the long rains last year - 1988, the whole basin was flooded and a few buildings erected unwisely near to the high water mark were also flooded.

We were taking a very keen bird watching friend to Baringo in June last year and saw the whole area inundated and teeming with bird life. As we we were in a hurry, we could not spendmore than twenty minutes, but in this time noted the following species, and we are sure that now that the area has 'matured', there could be many more.

This would be a very rewarding place to visit early in the morning of a week day when interested children would (or should!) be hurrying to school and unable to hang around too long. A member of your staff would, we feel be a wise addition to your party, if only to watch the car.

BIRDS SEEN:

Little Grebe
Pink-backed Pelican
Long-tailed Cormorant
Grey Heron
Black-headed Heron
Buff-backed Heron
Yellow-billed Egret
Hamerkop

Sacred Ibis	African Pochard
African Spoonbill	Little Tern
Red-billed Duck	White-winged Black Tern
Coot	

Should anybody be able to spend an hour or two there soon, the list of birds seen would be of interest, and would include some Palaearctic migrants particularly at this time of year.

Geoffrey & Dorothy Irvine, Box 30690, Nairobi.

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LETTERS TO THE EDITOR

Dear Sir,

A BIRD ATLAS OF KENYA

Adrian Lewis and Derek Pomeroy have done a wonderful job in the production of *A Bird Atlas of Kenya* which undoubtedly will become a pattern for future fauna atlases.

Information about each species is well-presented and comprehensive. If only we had had such a volume in the 'forties and fifties' !!

The provision of the transparent overlays (which are tucked away inside the back cover) showing different features of rainfall, altitude, forest and a key to the Atlas square numbers add to the pleasure of using the atlas. It is hoped to provide an annual up-dating scheme if sufficient interest is is apparent.

Many congratulations to all involved!

Dundas Bednall, 70 Herrington Road, Dorchester, Dorset DT1 2BJ. England.

Editors Note. Unfortunately this Atlas is not yet available locally, but can be ordered direct from the publishers A.A. Balkema Uitgevers B.V. Postbus 1675, NL-3000 BR Rotterdam, Netherlands. It is believed that the price is approximately Stg.£30.

Dear Sir,

TIMOTHY JOHN BARNLEY

I was very interested to read Tim Barnley's obituary in the September issue of the *Bulletin*.

Mr Ellis is absolutely right about Tim's reluctance to commit his valuable ornithological knowledge to print, but he was a highly enthusiastic contributor to the Kenya Bird Atlas, taking great trouble to send very detailed notes from the Kitale-Elgon area.

Many of his records are important, and I am happy to say that these all see the light of day in the atlas, each and every one attributed to "T.J. Barnley *in litt*".

A. Lewis, Box 25296, Nairobi.

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SOCIETY ANNOUNCEMENTS

IMPORTAMT NOTICE : ANNUAL GENERAL MEETING

The Annual General Meeting of the Society will be held on Monday 8 May 1989 in the Ford Foundation Lecture Hall of the National Museum, Nairobi.

Nominations for Office Bearers and Members of the Executive Committee as well as matters to be included in the Agenda should be sent to the Hon. Secretary, Box 44486, Nairobi to reach her before 10 April.

The following Members of the Executive Committee wish to stand down: The Chairman, the Treasurer and the Editor of the Journal.

Nominations for all positions on the Executive Committee are SERIOUSLY requested. Full particulars of all nominees, including their address and details of present employment (where applicable) should be supplied.

IT IS ESSENTIAL THAT NOMINATIONS FOR THESE POSITIONS BE RECEIVED.

THE SOCIETY *NEEDS* YOU

JOURNAL OF THE EAST AFRICA NATURAL HISTORY SOCIETY AND NATIONAL MUSEUM Vol. 78

The following *Journal* parts of Vol.78 are now available on application to the Hon. Secretary, Box 44486, Nairobi, Kenya.

Vol.78,No.191	A TAXONOMIC REVISION OF THE GRASSHOPPER GENUS *SPATHOSTERNUM* (ORTHOPTERA : ACRIDIDAE). It provides keys to the males of the genus, 7 species are recognised and 3 species are newly sunonymised. By J.P. Grunshaw.
Vol.78,No.192	Contains two papers: THE DISTRIBUTION OF SKATES AND RAYS ALONG THE KENYA COAST. It discusses distribution, abundance, reproductive biology and economic importance of Skates and Rays. By Peter B.O. Ochumba. A NOTE ON THE FISHES OF LAKE JIPE AND LAKE CHALE ON THE KENYA-TANZANIA BORDER. It discusses the fishes endemic to the two lakes (particularly Tilapiine species) and introduced species, the future of Lake Jipe and the suitability of some of these species for pond culture. By Stephen Dadzie, Rene D. Haller & Ethelwynn Trewavas.
Vol.78,No.193	FIG TREES (*FICUS* : MORACEAE) OF KENYA. This is a short natural history of the genus, a key, descriptions, distribution maps and line drawings. By H.J. Beentje.

THE EAST AFRICA NATURAL HISTORY SOCIETY
Executive Committee, 1988 - 1989

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CHAIRMAN'S REPORT FOR 1988 - PROF. JOHN KOKWARO

I would like to take this opportunity to welcome all of you to our 79th Annual General Meeting (A.G.M.), and also to report on the management of the Society's affairs throughout the year. This year's A.G.M. is, however, a special one since we are also celebrating our 80th anniversary.

Last year was one of the most successful in terms of membership, activities and overall administration of the Society's office since I joined the Executive Committee some ten years ago. The membership reached a record figure of 653 by 16 Nov., 1988, indeed one of the highest if not the highest number of members we have recorded in a single year during the last ten years. This was a sign of good management and the trust that members had in the outgoing Executive Committee. The entire Executive Committee, especially the office bearers, worked extremely hard on their respective assignments with great devotion and commitment. Allow me at this juncture, to say a special word of thanks to Ms. Lorna Depew our Hon. Secretary who did a most commendable job at the Society's office. She improved the quality of work at the office to the highest standard I have witnessed among all the six Hon. Secretaries I have worked with, both as Vice Chairman and Chairman of the Society.

As Chairman, I continued throughout last year with the job of following up the case of the former Hon. Secretary, Mrs. Martina Muga, who had misappropriated Society's funds in 1987. After she failed to pay back the money she had stolen in 1987, I informed the Executive Committee that we had no other alternative except to report the matter to the Police for appropriate action. The Chairman reported the matter to the Police and Mrs. Muga was arrested on 17 Aug., 1988. She was subsequently charged before a court of law for "theft by servant" the charge being that she did not account for Kshs. 21,457.20 as revealed by the Society's 1987 audited accounts. The case has been dragging before the Kibera Law Court, with a recent hearing having been held on 14 Mar., 1989 when I, the Vice Chairman (who is also the former Hon. Treasurer) and a representative from our auditors, Muchekehu & Co. gave evidence. Another hearing of the case was held on 25 April, 1989, when the C.I.D. Police Officer who arrested Mrs. Muga on the 17th Oct., 1988 also gave his evidence before the Magistrate. The next hearing was fixed for 9 May, 1989.

A few points were noted during the court proceedings in this case which we must take seriously as a Society. The prosecution observed a lot of laxity in our terms of reference offered to our office bearers, especially those entrusted with the Soceity's funds. It was therefore stressed that, although we operate as a voluntary organization, our office bearers such as the Chairman, Vice Chairman and more specifically the Hon. Secretary and the Hon. Treasurer should sign some brief agreement documents containing their job descriptions, identification and local addresses.

Since it is both the Hon. Secretary and Hon. Treasurer who are involved in the routine handling of the Society's funds, and because of recurrent problems of misappropriation of the funds, I am suggesting the following few points as a means of solving the problem in future:

1. Remove that clause of atricle 11 in our constitution which states "(which posts may be combined)" meaning that the posts of Hon. Secretary and Hon. Treasurer may be combined. The two posts must never be combined because that is why it took the Executive Committee a long time to discover the 1983 problem, since both posts were at that time held by one person.
2. Owing to the nature of their work, I am suggesting that both the Hon. Secretary and the Hon. Treasurer be paid an honorarium (not a salary) at a ratio of 3:1 respectively. Having in mind our financial limitations, but also the commendable job the current holders of the two posts are doing, I would recommend to the A.G.M. that their current honorarium rates be raised slightly from Kshs. 1300/- and Kshs. 200/- to Kshs. 1500/- and Kshs. 500/- respectively.
3. The position of Hon. Legal Advisor to the Society should be urgently reviewed and established. Copies of brief contract letters signed by both the Hon. Secretary and Hon. Treasurer should be deposited at the Society's office, with the Chairman and/or Patron and with the Society's Legal Advisor. Fortunately, I kept a copy of such a letter signed between Mrs. Muga and the Society at my University office, and I produced it in court as an exhibit. The copy of the letter deposited at the Society's office could not be traced.
4. The Society's regular income in the form of both cheques and cash must be banked at least fortnightly by the Hon. Treasurer. It is the duty of the Hon. Treasurer to report to the Executive Committee the exact financial position of the Scoiety every month during the Executive Committee meetings.

Apart from that above mentioned incident which was a carry over from the previous year, 1988 activities went on very smoothly.

FUNCTIONS

Under the able leadership of our Functions Organizer, Mrs. Dorrie Brass, the monthly evening lectures and film shows went on very well. The monthly camping and day trips organized by Mrs. Brass were successful and were all well attended. Mrs. Fleur Ng'weno continued to organise her most popular Wednesday morning bird walks, and also the monthly Sunday morning "pot luck" excursions. Our thanks to Mrs. Ng'weno for her dedicated efforts in organising these activities throughout the year.

PUBLICATIONS

I would like to thank our Journal Editor, Dr. H.J. Beentje, for his excellent editorial work which made the following publication of Journal parts possible:

Vol. 78 No. 191. J.P. Grunshaw, A taxonomic revision of the grasshopper genus *Spathosternum*.
Vol. 78 No. 192 P.B. Ochumba, The distribution of skates and rays along the Kenya coast.
Prof. S. Dadze, et al., A note on the fishes of Lake Jipe and Lake Chale on the Kenya-Tanzania border.
Vol. 78 No. 193 H.J. Beentje, Fig trees (Ficus, Moraceae) of Kenya. (The Volume number was erroneously printed as 76)

The Bulletin under the able editorship of Mrs. Daphne Backhurst continued to appear regularly on a quarterly basis as Vol. 18 No. 1-4.

The Newsletter, compiled by Mrs. Dorrie Brass, continued to appear monthly, and is a useful source of quick information on Society matters, especially for functions for local members.

I would like to thank Ms. Lorna Depew, our Hon. Secretary for her assistance in running copies of both the Bulletin and Newsletter and for posting them promptly through her computerization of members' addresses.

Both Scopus and Annual Bird Report continued to be published by the Ornithological Subcommittee.

LIBRARY

Once again, I am pleased to report that the Library functioned smoothly throughout the year, with a lot of new reading material and good management. As recommended last year, the Librarian continued to attend the Executive Committee meetings in an ex-officio capacity. This arrangement has worked extremely well since both the Librarian and our Hon. Librarian, Miss Rosalie Osborn, have made recommendations and also solved problems pertaining to Library matters on the spot.

I would like to thank the following Society members who have assisted me in the running of the Society's affairs throughout 1988: Mrs. Inga Ayres, Mrs. Daphne Backhurst, Mrs. Dorrie Brass, Mrs. Lise

Campbell, Mr. Tim Campbell, Mrs. Judith Rudnai, Mrs. Gloria Hagberg, Mrs. T. Kroll, Mrs. Ann Visagie, Mrs. Marjorie Watts, and Mr. Peter Squelch. I would also like to thank our auditors, Muchekehu & Co. for making a statement to the Parklands Police Station and later on giving evidence at Kibera Law Courts on the former Secretary, Mrs. Martina Muga's, theft case.

Those present at today's Annual General Meeting will notice that I am not seeking re-election as the Chairman of the Executive Committee. It is indeed my personal feeling that I should step down from this position after serving the Executive Committee first as Vice Chairman and then as Chairman for the last ten years. It has been my great pleasure to serve the Society in those capacities, and I would like to thank all members of the Society, both local and overseas for their continued support throughout those years. May I assure all members of the Society that I am stepping down at a time when all Society matters including management, are at their best. And with your support to the incoming Executive Committee, I am sure things will be even better than what they are now. I shall be available for any advice or assistance the Executive Committee may need from me whenever the need arises. Thank you once again for your co-operation and support.

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A STRANGER IN OUR MIDST

At the beginning of July, 1988 we noticed a young baboon with our "home" troop of Sykes Monkeys. Most evenings the Sykes follow a course along the river feeding on the several species of wild fig and finally crossing the lawn to the loquat and avocado trees if they are in fruit. Late tea on the verandah often extends into comfortable viewing of these amusing creatures as they select ripe fruit, nibble and suck out the sweet centres and discard the skins. While feeding, the monkeys disperse throughout the tree but when it is time to move on they all follow a particular aerial route to the next destination. In the Ficus wakefieldii opposite the verandah this pathway follows a steeply descending narrow branch which terminates in a six foot jump to the lawn below and a quick sprint to the nearest cover - a small clump of banana trees. It was on one of these evenings that we first became aware of the young baboon tumbling uncontrollably along this particular branch and ending up rather dazed after a bellyflop landing on the grass below. However, he recovered himself seemingly unhurt and hurried off to catch up with his monkey friends. Incidentally, we automatically refer to our baboon as "he". He is never still long enough for his sex to have been definitely confirmed even though we have been watching him for nearly a year now. There is every chance that a more experienced eye might classify him immediately as female!

The attutude of the Sykes towards the baboon is a separatist one. He is tolerated but ignored. There is certainly no effort at integration and the baboon seems to realize that any advances on his part would be a waste of time. He seems grateful simply to be allowed to "tag along" but, although he is not actively rejected by the group, within it he is a complete loner. On only one occasion have we observed any interaction and that was an instance when the baboon and a fairly young monkey were coincidentally heading towards each other along the same branch. At about three to four feet distance the Sykes gave vocal vent to his irritation at finding his aerial pathway blocked by another user. The baboon certainly did not wait to argue; he turned tail and made off very quickly and the Sykes, having made his point, showed no further aggression. In all other encounters of this kind which we have witnessed the monkeys merely walk round or hop over the baboon as if he were a part of the tree itself.

The most obvious disadvantage that the baboon suffers is his lack of agility by comparion with the monkeys and it must cost him a lot of effort to keep up with his more acrobatic counterparts. However, he does manage and, during our observation period, even seems to have improved in this sphere. Neither does he any longer show fear. In the early stages of his association with the monkeys and after his initial experience of that flying leap from the fig tree to the ground he was very careful not to get himself into a situation he could not cope with. If an arboreal descent looked too daunting he would backtrack through the trees to find an easier way down and then he would make up time by racing at the double on terra firma to catch up. He now seems able to manage more or less every stunt that the monkeys can though not with quite the same grace. We have often seen him directly over the pool, balanced most precariously on hind legs at the end on an incredibly thin twig and stretching up with both hands to pluck figs from a branch above. He shows no apparent concern for the possibility of losing his footing and plunging into the water below.

However, we do wonder if this monkey diet completely fills his nutritional requirements. Although he would appear to be in good health and have adequate resources of energy to keep pace with the troop, he seems not to have made any visible growth during our period of observation. He also has a very unkempt and ragged appearance due to the fact that he has no personal friend or grooming partner.

Although we would never have considered a baboon as one of our favorite animals it is hard not to admire this plucky little fellow in his determination to survive. One cannot help asking how he came to lose his family in the first place and what sort of future his present existence holds for him. We guess that he somehow got separated from his mother at a time when a group of people were trapping baboons in the forest adjacent to our farm. However, it still seems strange that he subsequently attached himself to the Sykes instead of remaining with the baboons. Or, having been trapped himself, was he rejected for some reason and returned to the bush after his troop had long since moved on? As to the second question, I think we can only go on watching him and hope that he manages to have the happiest life possible in his rather strange and unique circumstances.

Jane Mayers, Box 43298, NAIROBI.

(Editor's note: For "he", in the above article, read "she", as the young baboon has recently been identified as a female.)

ROAD-KILLS AND OTHER RECORDS OF MAINLY SMALLER MAMMALS FROM KENYA:

DATA FOR A KENYAN MAMMAL ATLAS

This note details records of some smaller mammal species, many of which are rarely seen by day, that I have found as road-kills or, in some cases, seen alive. Larger species also mentioned include the Striped Hyaena and Black Rhinoceros. All of these reports refer to single individuals unless stated otherwise. Most of these records do not refer to national parks and reserves, since the faunas of these areas are already known in some detail.

These sorts of data will be of use to those carrying out distributional studies on Kenya's mammals, or actually contemplating the production of a Kenyan mammal atlas. Some points about the production of such an atlas, offered in the light of experience gained during the compilation of the recently published Kenyan bird atlas, will be made in a later note.

The records

1) Yellow-winged Bat, *Lavia frons*: often seen 1986-88 in the bush and low trees around Mara River Camp (1°11'S 35°03'E) and Lake Baringo Club. Also a sighting to the north of Liota Hills (1°24'S 35°36'E) on Aug. 17/88.
2) Greater Galago, *Galago crassicaudatus*: regularly at The Ark and Mara River Camp. All of these individuals are melanistic.
3) Lesser Galago *G. senegalensis*: several sightings in the semiarid bush of Samburu Game Reserve and the northeastern reaches of Meru National Park, 1986-88. Also regular in and around Cottar's Camp (1°35'S 35°31'E).
4) African Hares, *Lepus* spp.: identification not certain to species level. Records: at 1°32'S 36°35'E on Nov. 1/86; several Kampi ya Samaki (0°35'N 36°02'E) on Nov. 8/86; road-kill just south of Naro Moru on Oct. 7/88; road kill at Maralal on Oct. 30/88; road-kill near Suguta Mugie (0°45'N 36o32'E) on Oct. 31/88; in Lake Nakuru National Park on Dec. 6/88.
5) Striped Ground Squirrel, *Xerus erythropus*: several sightings around 0°14'N 37°58'E 1986-88; several sightings around 0°17'S 37°17'E 1986-88; Muthaiga, Nairobi on Apr. 22/88; road-kill at 0°58'S 37°05'E on June 17/88; road-kill at 1°06'S 37°01'E on Nov. 27/88.
6) Black-backed Jackal, *Canis mesomelas*: road-kill at 1°06'S 36°15'E on Sept. 27/86; road-kill at 0°04'N 36°55'E on June 21/88; road

-kill at 1°06'S 35°06'E on June 23/88; road-kill at 1°03'S 36°21'E on Aug. 17/88; during night game drive from Mara River Camp on Aug. 19/88, one was seen to pursue, kill (neck bite) and make off with an adult Spring Hare, *Pedetes capensis*; at Maralal Oct. 30/88.

7) Golden Jackal, *C. aureus*: often seen at night by bird-ringers at extreme southern tip of Lake Magadi in early-mid 1980s; a lactating female near Amboseli Lodge on Oct. 4/88; at Maralal Oct. 30/88; in Buffalo Springs Reserve on Jan. 20/89.

8) Side-striped Jackal, *C. adustus*: near Little Govenor's Camp (1° 16'S 35°02'E) on Jan 11/87 and subsequently; Buffalo Springs Reserve on June 19/88 (M.F. Ogola pers. comm.).

9) Bat-eared Fox, *Otocyon megalotis*: at Kampi ya Samaki on Nov. 8/86; road-kill at 1°06'S 36°15'E on June 23/88; road-kill at 2°33'S 36°50'E on Jan. 19/89.

10) Honey Badger, *Mellivora capensis*: road-kill at 1°33'S 37°08'E on Oct. 2/88.

11) Zorilla, *Ictonyx striata*: on airstrip near Lake Hotel, Lake Naivasha, on Nov. 29/86; one pursued across open plains by Tawny Eagle, *Aquila rapax*, at 0830 hrs. on Nov. 6/88, near Mara River Camp.

12) African Civet, *Viverra civetta*: road-kill at 1°06'S 36°03'E on Oct. 13/86; one on Jilore track in Sokoke Forest (3°17'S 39°58'E) at night on Jan. 31/88; road-kill at 0°06'N 34°50'E on Dec. 4/88.

13) Dwarf Mongoose, *Helogale undulata*: at 1°32'S 36°35'E on Nov. 1/86.

14) Large Grey Mongoose, *Herpestes ichneumon*: seen near Meru National Park (0°16'N 38°07'E) on Aug. 8/88, and also about one year previously.

15) Black-tipped Mongoose, *H. sanguineus*: in Amboseli National Park on Aug. 18/86; in Lavington, Nairobi, May 31/89; near Kiambu Town on Apr., 22/89.

16) White-tailed Mongoose, *Ichneumia albicauda*: one seen during the midnight hours in gardens near Nairobi Hospital, *circa* 1980; a road-kill on Riverside Drive (next to Chiromo University campus), Nairobi on Aug. 6/88; road-kill near Suguta Mugie (0°43'N 36°23'E) on Oct. 31/88; road-kill at 1°06'S 36°00'E on Nov. 3/88; road-kill near Vihiga on Dec. 6/88; road-kill at Narok on Dec. 18/88.

17) Striped Hyaena, *Hyaena hyaena*: commonly comes to lodge feeders in the Samburu-Buffalo Springs Reserve, and at the Ngulia and Kilaguni Lodges in Tsavo West; near Taita Hills Lodge on Nov. 20/86; road-kill 1°01'S 36°31'E on Nov. 3/88.

18) Aardwolf, *Proteles cristatus*: often encountered during night game drives from Mara River Camp 1986-88; and in daylight southwest of

Mara Serena Lodge in 1978, and near Kichwa Tembo Camp (1°13'S 35° 01'E) on July 13/87.

19) Caracal, Felis caracal: in Samburu Game Reserve on Aug. 22/86; one on Aug. 22 and Nov. 9/88 along the Jilore track in Sokoke Forest, in both instances at around 6:30-7pm.

20) Black Rhinoceros, Diceros bicornis: a female and calf (c.2-3 years old) in Mururi Swamp, Meru National Park, on Oct. 2/86. Game rangers commented that it was the first record from this area for some time.

Adrian D. Lewis, Box 25296, NAIROBI

A SECOND INSTANCE OF CATTLE EGRETS BREEDING IN A VILLAGE IN KENYA

Whereas Cattle Egrets, Bubulcus ibis, commonly nest within human settlements in the northern tropics of Africa, Lewis and Pomeroy (1989) could locate only one breeding site of this type in Kenya, in the village of North Kinangop (Siemens, 1984).

A second colony of this type exists in the middle of Emali trading center (2° 05'S 37°28'E), in a tall, shady tree next to the Total petrol station. On May 8 of this year, there were about 100 of these egrets, all in immaculate breeding plumage, in this tree, and most of the 40 nests had individuals sitting on them, presumably incubating. Another nest held a sitting Black-headed Heron, Ardea melanocephala, while a Marabou, Leptoptilos crumeniferus was standing on a nest at the top of the tree, devouring something.

The birds did not appear to be worried by the busy population of this thriving trading center, and there was no sign of the people activly disturbing the birds. This colony has been active in previous years (D.A. Turner, pers. comm.).

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Lewis, A.D. and D.E. Pomeroy. 1989. A BIRD ATLAS OF KENYA. Rotterdam: Balkema.

Siemens, L.A. 1984. Field notes from AUEA Biology Department. EANHS Bulletin 1984: 27-28.

Jean Hartley, Box 14098, NAIROBI

VARIOUS INTERESTING OBSERVATIONS ON RAPTORS: COSTAL KENYA, 1985-87

I have been looking through my bird records lately and have collected together a few, I hope, noteworthy observations on birds of prey that I had not got round to sending in to the Bulletin sooner.

1. At Nguuni, a relatively undisturbed sheep farm 9km NW of Mombasa which I used to visit twice a week between 1984 and 1987, in mid 1986 I saw a Great Sparrowhawk (Accipiter melanoleucus) flying over with a Doum Palm-nut gripped in one talon. The sight was made all the more bizzare by the fact that the leg involved was outstretched downwards - presumably by the weight of the nut. Although Harrier Hawks (Polyboroides radiatus) and Palm-nut Vultures (Gypohierax angolensis) eat palm-nuts, I have never heard of an Accipiter doing so.
2. Another incident involving this species occured in early 1987. I was giving a lecture at Mombasa Polytechnic at 7:15am (truely!), when the mobbing calls of Indian House Crows started up. Being a dedicated birder, I temporarily adjourned the lecture to investigate. Outside I found an adult male Great Sparrowhawk (judging from size) lying on its back with a speck of blood on its beak but still breathing, and about a metre away was a dead Feral Pigeon (Columba livia) of which there is a large population there. This was only 2 or 3 metres from the foot of the high wall of a teaching block which was painted white and was well lit by the sun. I assume that the hawk took the pigeon and headed for what it thought was open sky - the blank wall. I picked up the hawk, gripping its legs first, intending to keep it safe from the attacks of the crows, if and when it came around. But as soon as I lifted it, it looked round at me, so I put it down again. It then flew off weakly to a low branch where it alighted dizzily. Interestingly, as soon as it was airborne the crows, which had been haranging continuously, scattered in all directions with alarm calls. The blood on the beak and a respiratory click made me suspect internal bleeding and so I was not hopeful, but when I went out after the lecture 1 and 1/2 hours later, the hawk flew off strongly as I approached. There were no crows to be seen.
3. Talking of House Crows, I was pleased to see, in late 1985, a Peregrine Falcon (Falco peregrinus), which used to perch in a lone Casuarina tree at Mackenzie Point across the Tudor Creek from the Mombasa Club, take a House Crow which was flying across the creek from the Old Town and carry it to the tree.
4. At Msambweni in early 1987, I observed a Peregrine Falcon stoop on a Long-tailed Cormorant (Phalacrocorax africanus) which was flying low

over the sea. But the cormorant saw it coming and quickly landed in the water.

5. In late 1985 at Sabaki Estuary, about 100 metres downstream from the bridge I observed a Black Kite (Milvus migrans) which at first began chasing a Gull-billed Tern (Gelochelidon nilotica) round and round over a low sand bank in the middle of the river, on which there were a good number of Spurwinged Plovers (Vanellus spinosus) and a few terns and waders. Despite the fact that the kite was less agile than the tern it persisted for some time until, during a particularly low swoop, it suddenly changed direction and dropped onto a Spurwinged Plover which had been sitting there quite unconcerned. After pinning it down for a few seconds a sudden flurry allowed the plover to escape, but it was almost immediately recaptured and carried off. I wondered whether this was a standard ploy that the kite had developed.

6. Back at Nguuni over a wide shale quarry, I witnessed what I assumed to be a form of play between 6 Black Kites, juveniles and adults. One kite had a ragged piece of heaby gauge polythene sheet measuring about 1/4 metre square in its talons, and was occasionally pulling at it with its beak as it circled. It was being chased by the others who were trying to grab the plastic. Eventually one succeeded but lost its grip so that the plastic fell to the ground. Down went one of the kites, landed nearby and then walked like a large parrot, the metre or two to the plastic which it picked up in its bill, transfering it to its claws as it flew up. The chase continued for a few more minutes until the plastic fell to the ground again and the kites drifted off disinterestedly.

7. At Nguuni, there are a number of dams and on some of them are noisy colonies of Black-headed Weavers (Ploceus cuculatus) in Acacia or palm trees. One evening in Sept., 1987 at about 6:00pm while I was counting the nests at the largest of these colonies, a Bat Hawk (Macheiramphus alcinus) arrived and started flying round the dam and every time it neared the colony it would swoop at the weavers that were still in flight. It failed to make a kill, however, and flew off after 6 circuits. On arrival of the Bat Hawk, the weavers immediately fell silent and sought the shelter of the Doum Palm in which they were nesting.

A few evenings later, at the same site, a pair of Bat Hawks flew past and were attacked and chased by one of the resident Black-shouldered Kites (Elanus caeruleus).

Colin Ryall, Box 53331, NAIROBI.

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SOME NOTES ON A VISIT TO MANGALISA MOUNTAIN, TANZANIA

Mangalisa mountain (altititude 2287 m., 7°10'S 36°25'E) lies just north of the Great Ruaha River in the south-west part of the Rubeho range in Mpwapwa District. Access is by a steep and rocky road that was built to service the old mica mines that were once worked on the 1900 m. high plateau.

The charming people who live on the plateau are Wahehe who fled from Iringa following battles with the Germans in the late nineteenth century, and who say that they are now sufficiently isolated to have developed their own dialect of Kihehe. They grow maize and sweet potatoes and have water gardens of Cucurbitaceae along the stream by the village which they regard as being of importance in case there is a poor maize crop. Supplies and produce are brought to and from the plateau by donkeys, and cattle are grazed on the grasslands and forest glades. The moist forests are very little disturbed, though it was said that Msangasanga (*Podocarpus*) is cut for local use.

VEGETATION:

At 1900 m. *Brachystegia spiciformis*/*Uapaca kirkiana* woodland gives way to *Protea* grassland with tree clumps. In these clumps are the trees:
Albizia gummifera, *Apodytes dimidiata*, *Croton macrostachyus*, *Cussonia spicata*, *Dais cotinifolia*, *Erythrina abyssinica*, *Eulcea divinorum*, *Nuxia congesta*, *Olea capensis*, *Olinia rochetiana*, *Schrebera alata*.

The forest edge is at 2100 m. and the forest itself is remarkable in that it contains many large glades of *Protea* grassland. These glades appear to be associated with murram (clay and stones) soils. The forest type is undifferentiated afromontane with a canopy height of around 10 m., and afromontane rain forest in wetter areas with a canopy of around 20 m. and emergents (*Aningeria adolfi-friedericii*) reaching 30 m. *Coffea mufindiensis* is a common understory shrub. Tree species (with forest edge species) include:
Albizia gummifera, *Bersama abyssinica*, *Cassipourea malosana*, *Craibia brevicaudata*, *Cussonia spicata*, *Dais cotinifolia*, *Dombeya torrida*, *Euclea divinorum*, *Lepidiotrichilia volkensii*, *Maesa lanceolata*, *Myrica salicifolia*, *Mystrozxylon aethiopicum*, *Nuxia congesta*, *Olea capensis*, *Olinia rochetiana*, *Parinari excelsa*, *Peddiea fischeri*, *Podocarpus flacatus*, *Podocarpus latifolius*, *Rapanea melanophloeos*, *Rawsonia lucida*, Tecomaria capensis, Trichocladus ellipticus, Zimmermannia *stipularis*.

In wetter areas tree species included:
Aningeria adolfi-friedericii, *Neoboutonia macrocalyx*, *Ochna holstii*,

Phoenix reclinata, Polycias fulva, Syzygium guineense subsp. afromontanum.

The forest trees mentioned are widespread afromontane species, though of interest is the occurrence of Zimmermania stipularis and Dais cotinifolia. The genus Zimmermania is an indicator of the Eastern Arc type of forest, and so suggests that other species of interest may be present in the Mangalisa forests. An example is the beautiful red flowered climbing Labiate Tinnea vesiculosa, which is otherwise only known from the Usambara and Uluguru mountains. Dais cotinifolia is a southern African species common in tree clumps on the Uzungwa plateau grasslands, and this is the most northerly record of it.

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CARNIVOROUS SUNDEW REDISCOVERED IN A WESTERN KENYA HIGHLANDS BOG

We have located a population of sundews, Drosera madagascariensis (Droseraceae), in a small springfed bog adjacent to Lake Pirei 1k m east of Kimondi in Nandi District at an elevation of 1920 m. Based on a 10% sampling of the 1000 sqm to which the sundews are restricted, we estimate the total number of sundews to be 40,000. These reddish plants have a trailing stem with alternate stipulate leaves that bear tiny glands for trapping and digesting insects. The small pink flowers are borne toward the end of an erect stem that is about 15 cm long. We have observed flowering plants throughout the two months (March-April, 1989) that we have been studying the bog.

Although sundews have a wide distribution in other parts of Africa, they are considered rare in Kenya (Agnew, 1974). The only Kenyan specimen of this species in the National Museum Herbarium in Nairobi was collected near Soy over 40 years ago.

Associated with the sundews are several other plants that we have not noticed elsewhere, including Eriocaulon transvaalicum var. hanningtonii (Eriocaulonaceae) which, according to Agnew, had been collected in Kenya only twice previously from the Kitale area, and Genlisea hispidula (Lentibulariaceae), another rare insectivorous plant that was previously colected only in the Cherangani Hills.

We would like to know of any other occurrences in Kenya of these plants.

REFERENCE

Agnew, A.D.Q., 1974. Upland Kenya Wild Flowers. Oxford University Press, London.

A. Dwight Smith, Edwin Kagoda and Benjamin Mumba, Dept. of Science and Mathematics, University of Eastern Africa, Box 2500, Eldoret.

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LETTERS TO THE EDITOR

Dear Madam,

I am responding to Geoffrey and Dorothy Irvine's note about the Limuru swamp on page 10 of the March, 1989 Bulletin.

On the morning of 12 February, 1989, in company with some birders from England I spent about an hour beside the swamp. Following is a list of the birds we saw.

Little Grebe, White Pelican, Pink-backed Pelican, Long-tailed Cormorant, Grey Heron, Black-headed Heron, Squacco Heron, Great White Egret, Yellow-billed Egret, Cattle Egret, Little Egret, Hamerkop, Yellow-billed Stork, Hadada, Sacred Ibis, Glossy Ibis, Egyptian Goose, Hottentot Teal, Yellow-billed Duck, Maccoa Duck, Fulvous Whistling Duck, Red Billed Teal, Garganey, Southern Pochard, Pintail, Red-knobbed Coot, Jacana, Blacksmith Plover, Black-winged Stilt, Common Sandpiper, Marsh Sandpiper, Wood Sandpiper, African Pied Wagtail.

Pat J. Frere, Box 14490, NAIROBI.

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A BIRD ATLAS OF KENYA: Notes and announcements.

I. How to find out where you are:

Several recipients of this soporific tome have mentioned the following two points:-

1) that the book's transparent map overlay has been printed on relatively flimsy material, that may not stand the test of prolonged use. This is quite true, and the only remedy that I can suggest is to trace the overlay's 4 maps onto some tough, transparent plastic, like the material that is used for overhead projector transparencies. Another idea might be some kind of photographic reproduction. (Ed's. note: Some of the shops like Copycat and Gestetner can copy diredtly from the overlays onto transparancies, but at about sh.100/- per page; there are also some copies of the base map in the office.)

2) the second point is that, even using the overlay, some people are finding it difficult to determine (a) where a certain quarter square degree lies on the atlas maps, and/or (b) which QSD they are actually in when birdwatching in the field. If you are really interested in these square numbers - and, after all, they are the basis of the atlas' mapping - then the thing to do is to buy something like the excellent 1:1,000,000 Kenya and northern Tanzania Route Map (Publ.: Survey of Kenya; available in bookshops), and draw in the QSD boundries at 30' intervals yourself. QSD numbers and ABCD nototion can then be written into the squares in highlighting felt tip or something similar. This will give a greatly magnified key to the square numbers.

II. Storage of important papers relating to compilation of the atlas:

From May 1989, all important papers remaining from the compilation of the Kenya bird atlas will be stored in the archives of the National Museum of Kenya in Nairobi, where they will be available to any bone fide researcher who would like to consult them.

These papers include the project's hand-entered base maps, quarter square degree species' check-lists and species' information sheets, annotated early drafts of the text, correspondence with field observers, a complete set of the computerised environmental analyses for each species, a copy of the computer diskette used to print the book's maps, a copy of the forthcoming bulletin that lists new atlas data and book's errata, all documents mentioned in the book's bibliography as being kept by the East Africa Natural History Society, etc.

Adrian D. Lewis

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IMPORTANT ANNOUNCEMENT

Nest Record Scheme Cards

Our new nest record scheme organizer has requested that anyone holding any nest record cards please return them to the office (EANHS, Box 44486, NAIROBI) immediatley, to enable him to get out a nest record report as soon as possible.

MEMBERSHIP:

This offers you free entry to the National Museum, Nairobi; free lectures, films, slide shows or discussions every month in Nairobi; field trips and camps led by experienced naturalists; free use of the Joint Society-National Museum Library (postal borrowing is possible); a copy of the EANHS BULLETIN every four months and a copy of each Journal published during your period of membership. The Society organises the ringing of birds in eastern Africa and welcomes new ringers. It also runs an active Nest Record Scheme. Membership rates are given below.

JOURNAL:

The Society publishes the Journal of the East Africa Natural History Society and National Museum. Each issue consists of one paper; sometimes two or more short papers may be combined to form one number. Several may be published during one year. Contributions, typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, P.O. Box 44486, Nairobi, Kenya. Authors receive twenty-five copies of their article free.

EANHS BULLETIN:

This is a printed magazine issued four times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (EANHS BULLETIN), P.O. Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs can be published.

SCOPUS:

The Ornithological Sub-Committee publishes this bird journal five times a year, cost Kshs.100 per annum. All correspondence to D.A. Turner, P.O. Box 48019, Nairobi, Kenya.

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NOTES ON THE IHANGANA FOREST AND LUHEGA FOREST NEAR UHAFIWA UZUNGWA MOUNTAINS, TANZANIA

Apart from the Kigogo forest on the Brooke Bond tea estate at Mufindi, the moist forests of the southern Uzungwa mountains are not well known biologically. A small forest patch at Lulanda just to the north of the Brooke Bond tea estates has recently produced some interesting new records, new species, and a new genus of plant. So it was hoped that the larger Luhega forest to the north of Lulanda would produce still more novelties, and larger populations of the rare species found at Lulanda. Consequently we made a brief reconnaisance visit to the extensive Luhega forest in the area near Uhafiwa village. In doing so it was necessary to pass through Ihangana forest and so some observations on that forest patch are included here. Because the Lugeha forest is difficult to get to, it was not possible to reach the wetter scarp face and higher ridges on this visit, and we hope more extensive exploration of the area will be possible in the future.

Ihangana Forest

The Ihangana forest is located at 8° 17' S, 35° 43' E at an altitude of 2000m some 30km from the Uzungwa escarpment edge on the rolling hills of the Uhehe plateau. It is surrounded by short grassland on the infertile murram (clay and stones) soils characteristic of the area. Additional forest patches occur in the heads of valleys, though most of these have been cleared for cultivation as it is only on the forest soils that it is possible to grow maize. The forest has a canopy of about 20m tall, with large emergent Aningeria to 30m. The following tree species were observed:
Albizia gummifera, Aningeria adolfi-friedericii, Apholia theiformis, Bersama abyssinica, Bridelia brideliifolia, Buddleja salviifolia, Cassipourea gummiflua, Cassipourea malosana, Croton macrostachyus, Cussonia spicata, Dias cotinifolia, Diospyros whyteana, Macaranga kilimandscharica, Maesa lanceolata, Maytenus acuminata, Ochna holstii, Olea capensis, Polycias fulva, Rawsonia lucida, Scolopia rhamnhipylla, Syzygium masukuense, Tecomaria capensis with the climbers *Dalbergia lactea, Toddalia asiatica,* and *Draceana laxissima.*

Luhega Forest

Luhega forest covers an entensive area of the southern Uzungwa escarpment, but it was only possible to visit the forest in the immediate vicinity of Uhafiwa village. The village is quite isolated as the nearest bus service is some 20km distant and when travelling the villagers prefer the three hour walk through the forest down the Uzungwa escarpment in order to catch the Tazara train at Chita. The village is located at 8° 30' S, 35° 51' E at 1470m in altitude. The main crop is maize which grows well in the valley bottoms but suffers on the valley sides due to difficulty in obtaining fertilizer. In addition there are pineapples, guava trees, banana, sugar cane, and the cultivated form of the bamboo *Oxyanthera abyssinica* which is used to produce the beverage "ulanzi" from cut stems. *Draceana steudnerii* is also present and this appears to be planted. Approaching the village there are dense stands of the shrub *Kotschya*, which is also present between the village and the forest edge in an area cleared of forest in 1974 during "operation "sogeza" which was designed to open up additional land for cultivation. A number of forest and forest edge species are regenerating in fallow parts of the cleared area, these are:
Aguaria salicifolia, Albizia gummifera, Anthocleista grandiflora, Apholia theiformis, Bersama abyssinica, Bridelia micrantha, Buddleja salviifolia, Dodonea viscosa, Ficus sur, Halleria lucida, Harungana madagascariensis, Macaranga kilimandscharica, Maesa lanceolata, Myrica sp., Nuxia sp., ? Syzygium cordatum (possibly a hybrid), *Tecomaria capensis, Trema orientalis,* with *Lobelia gibberoa* and much bracken.

The Luhega forest itself starts on the far side of the River Ruaha (Ruaha is the local name for a river, and this is not to be confused with the better known Great Ruaha River). The river is crossed on a foot bridge constructed of *Eucalyptus* poles and entered the forest at an altitude of 1320 m. There are much higher forested ridges above and to the east of the Ruaha valley which are the start of the steep Uzungwa escarpment. The forest appears heavily disturbed, though there is little evidence of recent cutting. The local people who accompanied us said that Muheti, *Ocotea usambarensis*, is now exhausted as a source of timber and that they were now cutting "Mkangazi", *Khaya nyasica*, from further down the escarpment and whose distinctive red wood we saw in planks in the village. All timber extraction is done by traditional pitsaw methods. The local people also mentioned the presence of "Mbega", the Black and White Colobus, and "N'kalaga", the Crested Mangabey. The canopy was rather broken at 20 - 25 m tall with large emergent *Anthocleista* to 30 m. Trees in the area of forest that we visited included: *Aguaria salicifolia, Albizia gummifra, Anthocleista grandiflora, Aphloia theiformis, Bersama abyssinica, Bradelia micrantha, Caloncoba welwithschii, Canthium sp., Cassipourea gummiflua, Cryptocarya liebertiana, Halleria lucida, Harungana madagascariensis, Myranthus holstii, Nuxia sp., Oxyanthus sp., Rapanea melanophloeos, Parinari excelsa, Sapium ellipticum, Trema orientalis, Vitex sp.;* with the shrubs *Carvalhoa campanulata, Grewia sp., Psychotria spp., Pauridiantha paucinervis, Tarenna pavettiodes, Tricalysia sp.;* the climbers included *Agelaea heterophylla, Allophylus sp., Dalbergia lactea,* and *Embelia schimperi;* dominant herb cover was the Zingerberaceae *Aframomum spp.*, and *Renealmia engleri*, with *Calanthe sylvatica, Piper capense, Piper umbellatum,* and a 2 metre tall *Impatiens* growing in clumps in swampy areas; epiphytes included *Diaphananthe goetzei* and *Medinilla engleri.*

Discussion

The Ihangana forest appears to resemble the forests described as "submontane" in Malawi (Chapman & White, 1970) and those at a similar altitude on the Livingstone mountains of Tanzania. However, they are occurring at a higher altitude and with more southern species (such as *Diospyros whyteana* and *Syzygium masukuense)* than similar forests in the Usambara mountains. As the Usambara mountains are 3 degrees further north and closer to the equator than the southern Uzungwa mountains it would seem paradoxical that the same forest type is growing at higher altitude further from the equator. The explanation probably lies in the fact that the Ihangana, Livingstone, and Malawi forests are further inland than those of the Usambara. They therefore have a more "continental" rather than an "oceanic" climate. They may also be subject to the "Massenenebung" or mass elevation heating effect which says that the bigger the mountain, the higher the temperature will be for any given altitude. The difference between the continental forest types and the oceanic forest types may reflect a fundamental difference in forest classification in Tanzania. Ihangana should be an Eastern Arc forest by virtue of its geographic location in the Uzungwa mountains, however it is actually a Lake Malawi forest type in terms of species composition (cf. Lovett, submitted MS). The part of the Luhega forest area which were able to visit was secondary in nature, though possessing some of the species characteristic of Eastern Arc forests such as *Renealmia engleri* and *Medinilla engleri.* According to the local people less disturbed forest occurs on the escarpment edge, and undoubtably here there will be many exciting finds. However, the question arises as to the date of the disturbance in the forest. The canopy was composed of secondary species which appeared to be fairly mature. It is possible that the forest was logged during the German or early British administration 60 - 80 years ago, or alternatively the forest is regrowth following complete clearance for cultivation at some time in the past. The presence of many forest species regenerating in the land cleared in 1974 and subsequently cleared and left fallow a number of times demonstrates that it is possible to retain secondary forest species on cultivated land. In the Kigogo forest further south cultivation ridges can be clearly seen in the forest, and the general lack of soil fertility on the Uhehe plateau would create an incentive to clear forest in order to plant crops. The Ihangana forest may also be secondary in nature for the same reason. Presumably the rural population was in the past greater than it is at present, which puts an interesting perspective on current concern about population growth.

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1988 AETFAT symposium, Hamburg.

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NOTES ON MADENGE FOREST, LIVINGSTONE MOUNTAINS, TANZANIA

Madenge forest is a small area of afromontane rainforest and undifferentiated afromontane forest near Milo mission on the western side of the Livingstone mountains, Tanzania. It is at an altitude of 2,000 m in Ludewa District, Iringa Region, 9° 55' S, 34° 45'E. The forest has been somewhat disturbed by logging and pole cutting, and so has a broken canopy of 30-40 m in the wetter more level areas with a lower canopy of 10-20 m in drier areas, the forest edge, and tree clumps in grassland near the forest.

Trees in the wetter higher canopy forest include:
Aningeria adolfi-friedericii, Apodytes dimidiata, Aphloia theiformis, Bersama abyssinica, Chrysophyllum gorongosanum, Cassipourea gummiflua, Diospyros whyteana, Drypetes gerrardii, Entandrophragma excelsa, Garcinia kingaensis, Hagenia abyssinica, Macaranga kilimandscharica, Maesa lanceolata, Maytenus acuminata, Neoboutonia macrocalyx, Ocotea usambarensis, Ochna holstii, Polycias fulva, Podocarpus, Prunus africana, Rawsonia reticulata, Rapanea melanophloeos, Syzygium masukuense, Xymalos monospora.

Trees on the forest edges and tree clumps include:
Agauria salicifolia, Bridelia brideliifolia, Cussonia spicata, Dodonea viscosa, Faurea saligna, Garcinia kingaenis, Hagenia abyssinica, Kiggelaria africana, Myrica salicifolia, Olinia rochetiana, Pittosporum viridiflorum, Rapanea melanophloeos, Scolopia stolzii var. *riparia, Tecomaria capensis.*
The trees in Madenge forest are all relatively widespread afromontane species and none of the typical Eastern Arc species were seen. The forest is under the climatic influence of Lake Malawi on old crystalline rocks, and so the Eastern Arc endemics would not be expected.

The butterfiles are rather more interesting than the trees as *Charaxes xiphares brevicaudatus* and *Epamera congdonii congdonii* were taken. The *Charaxes* is probably new material of subspecies *brevicaudatus*, the type of which is no longer extant. The type was taken at Manow mission, Rungwe District, but has not been recollected there. The possibility exists that Milo mission, where the butterfly is common, is in fact the original type of locality. The *Epamera* is the mostly westerly record of the subspecies *congdonii.*

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BIRDS AT TINGANGA ESTATE, KIAMBU

The offer of Pygmy Geese almost on your doorstep is not something to be passed up lightly and so, at Fergus McCartney's kind invitation, Mary and Keith Sinclair and I hared up to Kiambu on a fine, late April morning. Our destination was Tinganga Estate, which grows coffee amidst quite steeply undulating terrain in the hills a few miles northwest of Kiambu Town. As well as the large areas of coffee, the estate has a dam, damp valley bottoms with marshy grasses, bushes and trees, and other tall, scattered, indigenous trees.

As is to be expected with Fergus, his living room windows open onto well-stocked bird feeders which, as well as hordes of more commonplace species, were being used by Spotted-flanked and White-headed Barbets, the latter in particular being a rather local bird. Several beautifully marked striped Mice, a small mammal really worth looking at, dashed about the lawns beneath the gorging birds.

We drove to a dam, passing marshy valley bottoms choked with tall, luxuriant grasses where Blue-headed Coucals and Grosbeak Weavers breed. A pair of Black-tipped Mongoose dashed into, and out of, the road in front of us.

The dam was idyllic, a quiet, water-lilied water set in a hollow in the hills. It is well stocked with fish, and so was supporting a Fish Eagle, a Darter, several Greater and Long-tailed Cormorants and, on further investigation, Giant, Pied and Malachite Kingfishers.

A search through the water lily pads eventually found the Pygmy Geese, two males and female as splendid, quiet and inconspicuous as ever amidst their 'floating gardens'. Fergus has seen them on this dam twice before, both times in March. These records presumably reflect wanderers, as the species is only thought to be resident in the moist west of Kenya, and in the coastal lowlands, inland to the Lake Jipe area. Little is known about its movements, but these March-April occurrences at Kiambu seem to fit into the general seasonality of this bird's

December-February absence from Somalia, a January pair that appeared at Mau Narok, and some May records at Lake Baringo. It is evidently on the move at these times of the year, though where to, and why, no one knows.

White-backed Ducks and Jacanas also frequent these lily pads, but were not there for us. We did see a pair of Black Ducks though, and some Yellow-bills, while one of the numerous Little Grebes was loitering suspiciously close to a floating nest.

Birds of prey did us well. An adult African Goshawk flopped around the treetops, quartering the ground, as we arrived, while a subadult Harrier Hawk allowed quite a close approach as it eyed us from a completely exposed perch, high in a dead tree. Later on it became still more eccentric, flying down to some bare lakeshore right in front of us to shuffle back and fore, looking for all the world like a youngish Egyptian Vulture, with its shaggy head, yellowish face and general, 'leaning forwards' stance. It finally waddled down to the water's edge, to drink.

Those myriad afficionados of Cisticolana can rest assured that this redoubtable genus did not let us down. Red-faced Cisticolas were numerous, noisy and extrovert in the waterside reeds, and even produced vibrant crescendos from further away from the lake, up amongst the coffee - though whether they are actually resident in these bushes (which would be strange), or whether this was just an exuberant foray, full of the joys of life, is another question. The Red-faced's calls resemble those of the better known Singing Cisticola but are more frantic and whip-like, a loud, furious "teees-whip", as against the Singing's more ringing and melodic "pitch-choo". Our rather limited explorations failed to find Singing Cisticolas, possibly due to the lack of suitable habitat: the waterside vegetation demonstrably being 'Red-faced Land' while, further away from the lake, the scrub tangles that the Singing loves so much in our Nairobi gardens had all been replaced by coffee.

The marshy valley bottoms with shortish grasses held Stout Cicsticolas, great lumps of birds (for cisticolas), with bright orange-brown heads and dark, beady eyes prominent on pale faces. And, since we were at an altitude of around 6,000 feet, rather than in the lower parts of Nairobi district, the duets of Hunter's Cisticola, a bird of the highlands, filled the air.

A walk up a blind valley behind the lake was productive. Small flocks of Eurasian Swallows passed purposefully overhead, resplendent in immaculate plumage soon to be put to use on their breeding grounds in eastern Europe. These were the only Palaearctic migrants that we encountered. A Long-crested Eagle plunged into the coffee bushes and, as we searched for it, hurtled upwards again with hapless prey pinned in its claws - only to be immediately and furiously harried by a splendid adult Augur Buzzard, hell-bent on piracy. A pair of Red-throated Wrynecks sat conspicuously out on bare trunks. This blind valley was doing its stuff!

A Yellow-breasted Apalis foraged steadily through some acacia canopies, and we followed its progress until Mary's attention was drawn by low 'chook' calls emanating from another of these flat-topped trees, further up the track. The three birds that met our searching eyes made even cisticolas look gaudy, and it was a few moments before their featureless, overall brown colouration was relieved by the white edges to the tail that identify the Brown Parisoma or, as it was once known, the Brown Tit-Flycatcher. These white tail edges are a distinctive field mark so that, since it is but infrequently seen, this species' Kenyan representative must either be few in number, or very localised, or both. Some consider the black and white mottling on the throat to be a useful fieldmark, but in practice this patterning is very difficult to spot unless the bird is no distance away.

This small valley's final offerings were one or two pairs of African Sand Martins that seemed to be feeding young in nest holes excavated in a steep earth bank, just below where the valley's end rose steeply into yet more coffee-clad hillsides. A collapsed length of the bank showed one of the martins nest holes in section. After digging straight into the bank a little way, the birds had continued their excavations parallel to the bank's face (where the soil might be less compacted?), so that their tunneling was never far from the surface. It would be interesting to know if this is a general feature of their nests.

Despite being set in plantations, this small area around the dam and along the blind valley yielded over 50 species of birds - our thanks again to Fergus for an excellent day.

Adrian D. Lewis, Box 25296, Nairobi.

NOTES ON MARABOU STORKS *LEPTOPTILOS CRUMENIFERUS* AT SHINYANGA, TANZANIA

There have been increasing accounts of Marabou Storks *Leptoptilos crumeniferus* breeding in Tanzania by North (1943), Benson and White (1957), Thomas (1960, 1962), Morgan-Davies (1964) and Easton (1976, 1979).

I here present further notes on new nesting colonies of *Leptoptilos crumeniferus* in Shinyanga town.

On 16th October, 1988, a nesting colony of Marabou Storks was noted near the centre of Shingyanga town, in a flat-topped Acacia tree *(Acacia tortilis)* standing twenty metres south of Shinyanga Commercial Institute main domitory: The total number of nests counted in the tree was 16, and were classified as follows:

Status of nest	**Number of nests**
Nest intact and occupied by one fully-fledged young	5
Nest intact but empty	9
Nest partially destroyed	2

Nesting materials dropped on the ground under the fourteen metre tall tree (average canopy diameter c.15 m) were numerous, suggesting more nests were present during the peak of nesting than the number given here. Adult Storks were also present but their numbers fluctuated with time.

This is a new nesting site not previously observed and described. Previous notes on nesting colonies of Marabou at Shinyanga are given by Easton (1975, 1976). All the sites he mentioned were visited during my week-long stay (14 - 21 October, 1988) at Shinyanga. The sites still show active utilization as nesting colonies (some nests and birds were seen). The persistent utilization of these sites together with a new observation, suggest that Shinyanga town is becoming increasingly important to Marabous. Constant availability of scraps from abattoirs, butcheries and rubbish dumps, and the occurrence of big *Acacia tortilis* trees in the vicinity are probably key factors favouring nesting of this species.

There is therefore a possibility of an increase in the Marabou population at Shinyanga; and it has recently become common to see these birds in many parts of the town.

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Charles Mlingwa, Department of Zoology and Marine Biology,
University of Dar es Salaam, P.O. Box 35064, Dar es Salaam, Tanzania.

STRIPED HYAENA FORAGING IN DAYLIGHT

Standard reference texts and fieldguides describe the Striped Hyaena *Hyaena hyaena* as primarily nocturnal, although also abroad occasionally by day.

These hyaenas have become very tame and frequent, nocturnal, visitors to the area immediately in front of the dining room and the bar at Kilaguni Lodge in Tsavo West National Park, where food scraps are regularly put out to attract the various smaller carnivores that are active in this area at night.

A single individual is usually present, but two appeared together at the Kilaguni feeders during the evening of June 27, 1989. Two were again present in front of the Lodge at dawn the following day and, although one disappeared soon afterwards, the other continued foraging in the general vicinity until 7.30 am, by which time, on a beautiful clear morning, the area was bathed in bright sunlight.

Kingdon's *East African Mammals* mentions a sighting in virtually uninhabited country to the east of Lake Turkana at four o'clock in the afternoon, and speculates that this creature's nocturnal nature may derive in part from persecution by humans. The hyaenas at Kilaguni are certainly habituated to human presence and, in this area of the National Park at least, free from all threats from pastoralists, farmers, etc.

A.D. Lewis, P.O. Box 25296, Nairobi.

WAS IT AN INCIDENTIAL OBSERVATION OR DO THEY ACTUALLY GUARD WALLOWS?

It is during one of those beautiful sunsets in the Masai Mara Game Reserve at around 6.30pm. I am sitting outside the verandah of my house at the Mara Research Station. The house is built amidst beautiful *Balanites* trees and two small streams on either side which together converge to a small swamp about 50-60 m in front of the house. In this swamp many things happen. Warthogs *(Phacochoerus aethiopicus)* love wallowing there and then rest in the bushes nearby, buffaloes *(Syncerus caffer)* love that too, zebras *(Equus burchelli)*, giraffe *(Giraffa camelopardalis)*, waterbuck *(Kobus ellipsiprymnus)* also frequent the swamp. Other frequenters of the swamp are the biggest of them all: *Loxodonta africana*, the African Elephant.

Today, 29 March 1989, something interesting has happened in this swamp. I saw four to five buffaloes leading a bigger herd numbering some 300-400 animals slowly coming towards the swamp, and start drinking water. In a few minutes, more joined in, young, sub-adults, and adults. All is orderly as some drink, others feed nearby and the rest are still coming in. Suddenly, there is a stampede and confusion as the buffaloes start fleeing in the direction from which they had come. I look around for a hidden predator but I see nothing. Some three to four big buffaloes, probably males (?), cannot take any more of this! They decide to stay! Their heads are raised and they are most likely alarmed. Then I see from a nearby bush amongst the trees, someone quickly coming towards the swamp. And this is what the buffaloes that were at the periphery saw - one big mad jumbo. His trunk half-raised but seemingly not alarmed. The remaining few buffaloes see him and dash away in the opposite direction but for only a few metres. They stop and look back in the jumbo's direction. The jumbo starts to walk towards them trunk still half-raised. He does not seem ready for war, perhaps because the buffaloes have given way? He continues walking towards the buffaloes as the latter continue to flee. Meanwhile, the rest of the herd is still within reach and have formed a circle almost surrounding the elephant. The elephant stops following the reluctant buffaloes and walks back towards the centre of the swamp. His trunk is still up and he momentarily stops to pick some smell from the air. Reaching the muddy patch of the swamp where most of the buffaloes were, he stops and raises his trunk even higher now. He stays here for fifteen to twenty minutes, alternately lowering and raising his trunk. Unfortunately, the drama does not unfold before dark. Most of the buffaloes are still looking in the jumbo's direction but with the jumbo just standing there. Later on in the course of the night, I hear noises as if the buffaloes finally managed to get back to the swamp. Perhaps the jumbo let go at last.

Does anyone have an idea what may have been happening - whether he was just a mildly unhappy jumbo who did not want to be disturbed where he was resting in the bush, or was he guarding his (or his family's) lovely wallow?

Oscar Wambuguh, Mara Research Station , March 1989.

WEDNESDAY MORNING BIRD WALK REPORT

As new members may not perhaps be aware, a variable group of people (local regulars, students, visitors and tourists) meets at 8.45 am every Wednesday, whatever the weather, outside the National Museum for the purpose of looking at Nairobi birds in their natural habitat and getting to know them. Our able and stalwart leader is almost invariably Fleur Ng'weno, who imparts her wisdom with clarity and flair, and is willing to tell us something of the local botany too.

Records of all our bird sightings are kept and can be consulted by contacting me at telephone 512691. The "Top Twenty" most seen birds for the period 1976 to 1985 was publised in the Bulletin of June 1986, and an analysis of the records from 1986 to 1988 reveals that the five most seen birds by our group are as follows:-

		'82'-85 Placing
1.	Black Kite *Milvus migrans*	2
2.	Common Bulbul *Pycnonotus barbatus*	3
3.	Reichenow's Weaver *Ploceus baglafecht*	4
4.	Variable sunbird *Nectarinia venusta*	1
5.	Pied Crow *Corvus albus*	11

This shows a relative increase for the Black Kite and another leap forward in sightings of the Pied Crow.

The places we visit are usually within Nairobi (with occasional excursions to Limuru), and include such favourites as the Arboretum, Karura and Ngong forests, City Park, Forest Edge Road and one of the best locations, behind the Carnivore Restaurant with its view into the National Park. We are also sometimes invited by kind participants to walk in their large gardens, always a source of many species. The flooding of the Limuru swamp the filling of the pond, which had temporarily dried out in 1988 however, produced a bonus (already reported on by a contributor in the March 1989 Bulletin) which yielded the following species of water birds:- Little Grebe, Yellow-billed Stork, Maccoa Duck, Black-necked Grebe*, Hadada Ibis, Common Moorhen, Pink-backed Pelican, Glossy Ibis, Red-Knobbed Coot, White Pelican, Sacred Ibis, Painted Snipe, Long-tailed Cormorant, African Spoonbill, 3-banded Plover, Greater Cormorant, Fulvous Whistling Duck, Blacksmith Plover, Grey Heron, White-faced Duck, Little Stint, Black-headed Heron, Egyptian Goose, Black-winged Stilt, Purple Heron, Pintail, Avocet, Squacco Heron, Shoveler, Black-headed Gull, Cattle Egret, Red-billed Teal, Whiskered Tern, Great White Egret, Hottentot Teal, Gull-billed Tern, Little Egret, Garganey, Common Sandpiper, Hamerkop, Southern Pochard, Greenshank.

*first sighting

Pat Wootton, P.O. Box 46134, Nairobi.

LETTERS TO THE EDITOR

Dear Sir

I have often wanted to enquire through the *Bulletin* whether any reader could throw light upon a strange little hawk, no bigger than a Kestrel, with soberly marked plumage of light greyish-brown, which used to turn up in Zanzibar town year after year between November and April (probably a migrant). It made itself known by flying after dark at high speed to and fro till 2 - 3 hours after sunset, among the trees and electric lights of the Court Precincts near my house, the whole time uttering a harsh squawk as it flew. One night it flew through my open window and perched on a ledge for a few minutes, but I was not quick enough to get my collectors 4.10 shotgun, and it flew out again. Very tantalising, but I saw it well enough to recognise it as a falcon, and to see the colour. I wrote a brief description (as above) in my remarks under *Falco amuernsis* on p. 66 of my paper on *The birds of Zanzibar and Pemba*" publised by the British Ornithologists Union as its Check List No. 2 in 1979.

I do not know *F. amurensis, a*nd would be interested if any members could suggest any idea as to what it might have been. It still puzzles and tantalises me after many years.

R.H.W. Pakenham, 9 Kirkwick Avenue, Harpenden, Herts AL5 2QU, U.K.

Dear Sir

I enclose a copy of a copy of a letter which was sent to Coastweek of 4-10 August 1989 for inclusion in the Bulletin which publiceses what Bruce Buckland and his committee are doing to reduce the crow menace in Malindi.

This scheme is really successful and already it is noticeable that the crow population is diminished. We hardly see any in our own neighbourhood and have many more indigenous birds back in the garden enjoying the bird bath and table.

Mrs. S.A. Roberston, P.O. Box 162, Malindi.

VIEWPOINT. FROM COASTWEEK 4-10 AUGUST 1989
Malindi Residents urged to support "Crow Campaign":

After six months operation we are pleased to be able to report that a satisfactory result has been achieved in reducing the number of Indian House Crows in Malindi and to a lesser extent in Watamu.

Since the scheme was started a total of 1,409 crows have been eliminated in Malindi, and over 200 in Watamu. In addition 104 nestlings and 149 eggs have been destroyed.

When the hotels closed for the low season we ceased trapping oprations, mainly due to lack of suitable bait food for the traps, except for one trap at the Game Department, Malindi and one trap at Ocean Sports, Watamu. Both traps continued to catch birds, but at a lower level, possibly due to the rains.

With the opening of the hotels we have re-opened the traps and four are now operating again very effectively in Malindi the fifth at Watamu is doing well and another will be placed at Watamu Beach Hotel after July 15.

At a committee meeting held today it was discussed that a team of two men should visit all hotels and lodges, houseowners and plot-holders with the request that they inspect their properties for nesting crows.

The team, who will identify themselves with a letter of authorization from the Game Department, will also carry a Register which we ask your coperation in filling out giving the date of the visit together with your name and other details.

BICYCLES
The cost of running the scheme are kept as low as possible however, the monthly running costs of staff wages, food, accommodation for two full time employees and general maintenance of the traps, bicycles and supervising the operation greatly exceeds the funds available to the committee.

This letter is therefore an appeal for further contributions. Some of you have been most generous for which we are very grateful, however in general our original appeal was disappointing and only a total of Kshs. 23,000/= was raised.

Please donate whatever you are able. The control scheme is working and already there are signs of indigenous birds returning to their former haunts and the nuisance factor reduced around many of the hotels and residences.

You can also help yourselves by taking greater care of how your garbage is disposed of and not making it available in uncovered mounds for any crow to feast on.

Please make your contribution payable to:

Malindi-Watamu Crow Fund, c/o Driftwood Club, P.O. Box 63, Malindi.
B.A. Buckland (Chairman).

SOCIETY NOTICE

Dear Madam,

THEFT BY SERVANT: CASE OF MRS. MARTINA MUGA

I am sure most members of the Society would be interested in knowing the outcome of the court case involving our former Hon. Secretary, Mrs. Martina Muga. For those who may have not followed the case closely, Mrs. Muga was arrested on 17 August 1988 and charged with "theft by servant" having not accounted for Ksh. 21,457.20 as revealed by the 1987 EANHS audited accounts. The Criminal case No. 6254/88 has been presided over by the District Magistrate Miss J.A. Oseko of the Kibera Law Courts. It is interesting to note that Mrs. Muga had the money to hire a Lawyer to defend her. The Chairman, Vice Chairman, Society's Auditors and the Prosecuting Police Officer represented the Society.

The Magistrate found Mrs. Muga guilty and on the 18 May, 1989 she was sentenced to eight months imprisonment with an alternative fine of KShs. 22,000.00 I am grateful for the assistance I have received from Mr. Kaloki of Muchekehu & Co. our auditors, Inspector Nicholas Omogo of Parklands Police Station, Snr. Inspector Wambugu of Kibera Law Courts, Prof. S.G. Njuguna, and most of all to the Magistrate, Miss J.A. Oseko, of Kibera Law Courts for upholding justice.

Prof. J.O. Kokwaro, Out going Chairman, EANHS

BOOK DONATIONS WANTED FOR NEW MUSEUM

The National Museums of Kenya is presently developing libraries at Fort Jesus Museum in Mombasa and Lamu Museum in Lamu to support the research programmes running in the two Coastal areas. The Lamu Museum library in addition to providing specialist services, will also be expected to play the role of a public library to serve Schools, Civil Servants and the General Public there as no public library Services exist in the entire Lamu District. The two Museums conduct research programmes in archaeology, anthropology, African history, Zoological and Botanical sciences as well as material conservation.

To support this programme, the main library in Nairobi is requesting donations of books, periodicals and any other relevant information and materials in practically all subjects from individuals as well as from institutions and publishers. The two libraries can accommodate a total of over 30,000 volumes. So far, the available collection numbers slightly under 2,000 volumes. Donations from people leaving Kenya are also welcome.

Further information about the programme and donations may be addressed to:
Japhet Otike, Librarian, National Museums of Kenya, P.O. Box 40658,
Nairobi, Telelphone 742131/742161.

THE EAST AFRICA NATURAL HISTORY SOCIETY - PUBLICATIONS

The EANHS which was founded in 1909, is the oldest Society of its kind in Eastern Africa, probably in the whole of Africa. The Constitution states that the main object is the advancement of Natural Sciences. It is to this end that the Society produces three publications: *The Journal of the EANHS & Nat. Mus.*, the *EANHS Bulletin* and in addition, *Scopus*, a purely ornithological journal, which is produced and published independently by the Ornithological Sub-Committee of the Society.

The *Journal* is a scientific publication covering all aspects of Natural History relevant to E.A. and is distributed to subscribers throughout the world as well as on exchange to museum and scientific libraries world wide. This is currently produced as 'Occasional Papers' of generally four per year, all are independently refereed. Papers for consideration are always welcome. As the Society finances for Journal publications are now healthy, publication consideration delays are much reduced and we hope that papers could be published well within a year.

The Joint Editors of the Journal during the past four years have been Dr. J. Hebrard and Dr. H. Beentje until Dr. Hebrard left the country in early 1988 when Dr. Beentje took over. Dr. Beentje has now also left the country and your Executive Committee, on behalf of all members, extend a sincere vote of thanks to them for their efforts in attaining such a high standard during their tenure.

The *EANHS Bulletin* was started in 1971 to provide an outlet for the publication of short notes on all aspects of Natural History which previously had been published in the Journal, which during that same year started to publish as 'occasional papers'. Initially the *Bulletin* which also served as a *Newsletter*, was produced monthly under the editorship of Graeme Backhurst, assisted by Daphne Backhurst, who typed the stencils, duplicated it and with the aid of the late Priscilla Allen and her band of 'willing helpers' collated and distributed it. This proved a popular medium for the publication of members observations and records, but it became what many members considered to be too ornithologically biased and too 'scientific'. Therefore in 1975, the Ornithological Sub-Committee of the Society launched *Scopus* which took papers and short notes and produced them in a more 'permanent' form by photolithography; it soon fulfilled its *raison d'etre* by attracting papers and notes of local interest which would otherwise have been published in various ornithological journals throughout the world, thus scattered and difficult to trace.

Meanwhile, the *Bulletin* was very ably edited and produced by Miss Denise Angwin from 1975 until 1982 when Daphne Backhurst took over the editorship and production. Since its inception the *Bulletin* has been produced as a cyclostyled, stapled publication which has been very variable in quality, due to the vagaries of our duplicating machine. Indeed, such were the 'vagaries' that succeeding members of the secretariat came to dread having to use the machine, and the collating and stapling required stalwart volunteers, among whom were numbered several 'old faithfuls' who always came to assist. Members owe them a great debt of gratitude. During this extended period of some 18 years the *Bulletin* was first produced monthly then bi-monthly and now appears quarterly. The *Newsletter*, which Miss Allen used to produce prior to the launch of the *Bulletin*, has been resuscitated, to inform local members of funcions, field trips and to provide a means of advertising.

At a recent Executive Committee meeting it was resolved that in this, our 80th year, the format of the *Bulletin* should be changed and improved, consequently it will now be produced using modern technology, using a word processor, a laser printer and finally be printed by photolithography. This will probably increase the costs but it is hoped that the improved standard of printing will stimulate the flow of articles and short notes to the desk of the Editor, Daphne Backhurst.

The Executive Committee of the Society would like to apologise to our members and readership for the poor quality and layout of the first number of the new format *Bulletin*. When the Committee saw the poor layout and badly produced 'run' it was a great disappointment and embarrassment to us. However, our typesetters have accepted responsibility for the errors and assure us that it will not happen again and that it was a case of genuine misunderstanding.

We would also like to apologise to those subscribers and institutions who bind the Bulletin, for the change of size occuring at the second issue of the year. The Editor of the Bulletin, Daphne Backhurst, was out of the country when this change was mooted and implemented, and other members of the Committee did not consider this aspect.

The Society's Executive Committee, under the enthusiastic guidance of our new Chairman, Professor Steven Njuguna, is working hard to improve the Society in all its aspects, but we need your help. Remember that the Executive Committee is there to represent the wishes of the Society as a whole, but we cannot operate in a vacuum, so please continue to give us your support, practical, financial and literary.

D. E. G. Backhurst and C. F. Dewhurst (for the Executive Committee.)

MEMBERSHIP:

This offers free entry to the National Museum, Nairobi; free lectures, films, slide shows or discussions every month in Nairobi; field trips and camps led by experienced naturalists; free use of the Joint Society-National Museum Library (postal borrowing is possible); a copy of the EANHS BULLETIN every three months and a copy of each Journal published during your period of membership. The Society organises the ringing of birds in eastern Africa and welcomes new ringers. It also runs an active Nest Record Scheme. Membership rates are given below.

JOURNAL:

The Society publishes the Journal of the East Africa Natural History Society and National Museum. Each issue consists of one paper; sometimes two or more short papers may be combined to form one number. Several may be published during one year. Enquiries regarding contributions should be sent to the Editor J.E.A.N.H.S., P.O. Box 44486, Nairobi, Kenya.

EANHS BULLETIN:

This is a printed magazine issued four times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor, EANHS BULLETIN, P.O. Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Black and white photographs can be published.

SCOPUS:

The Ornithological Sub-Committee publishes this bird journal twice a year at a cost of Kshs.100 per annum. All correspondence to D.A. Turner, P.O. Box 48019, Nairobi, Kenya.

EANHS MEMBERSHIP SUBSCRIPTION RATES PER ANNUM

	Local	**Overseas**
Institutional (schools, libraries)	Kshs 100	US$ 25 or UK £ 16
Full Local and Overseas	Kshs 100	US$ 11 or UK£ 7
Local Family	Kshs 150	
Student (full time student including university undergraduates; receive no Journal)	Kshs 20	US$ 8 or UK£ 5
Life Membership	Kshs 1500	US$144 or UK£ 90

Subscriptions are due by 1 January. From July you may join for Kshs 50 and receive publications from that date. Application forms for membership are obtainable from the Hon. Secretary, P.O. Box 44486, Nairobi, Kenya.

THE EAST AFRICA NATURAL HISTORY SOCIETY

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EAST AFRICA NATURAL HISTORY SOCIETY FROM 1909 - 1989

80th. ANNIVERSARY

It was in 1909 that a small group of enthusiastic amateur naturalists, including hunters, ornithologists, botanists and entomologists met at the home of the Governor Sir Percy Girouard, in Nairobi and decided to form the East Africa and Uganda Natural History Society. Mr F.J. Jackson, later Sir Frederick Jackson Governor of Uganda, became the first president and chairman of the Society and Mr C.W. Hobley became the first Honorary Treasurer. By the end of 1909, 64 members had joined the Society.

It soon became apparent that the accumulated data and material collected by the Society for the use of its members should be made available to a wider public and must be housed somewhere. A small room was therefore rented in the centre of Nairobi and the first Museum came into being in 1910. In the same year the Society issued its first annual report. Members were requested to collect specimens and duplicate heads of mammals for display. To start the Museum was a difficult task as funds were urgently required for display cases; thus it was that Mr Cherry Kearton, the big game hunter, author and photographer gave a cinematograph exhibition in the Railway Institute on 23 June 1910 on 'Moving pictures of East African game and birds.' The funds raised were used to order several teak display cases. The first Journal was produced in 1910 and by March 1911 several overseas institutions and museums made exchange arrangements for the Journal and today these run into hundreds.

At the same time books were being donated and were the start of the very comprehensive Library now in existence. The museum stock continued to build up and members of the Committee gave their time freely in preparing and cataloguing specimens. Mr Edward Battiscombe, Acting Chief Conservator of Forests in British East Africa, and a member of the Executive Committee at this time proposed forming a herbarium in the museum and members were invited to make collections in as many different parts of the Protectorate as possible. Useful hints on collecting and drying plants were given in the journal and from this start came a fine herbarium now incorporated in the Herbarium situated in the Museums' grounds in Nairobi.

In 1913 Sir Charles Belfield, the New Governor, became the Patron of the Society taking a keen interest in helping to collect considerable funds towards a more permanent museum building and the much needed full time curator. In 1914 Mr Arthur Loveridge, of the National Museum, Cardiff in Wales was appointed as the first full time paid curator and contributed many interesting articles to the Journal. Mr Loveridge was unable to take up his post due to difficulties which arose as a consequence of the war and faithful donors, including the Leakey family were still bringing in specimens and work was piling up. During the early war years it became impossible to produce the Journal and this was a sad state of affairs for the office bearers of the Society because the Journal was needed to keep members interested. During 1916 the Society was finding the rented premises quite inadequate for the display of specimens and the Committee discussed the possibility of erecting a more permanent museum on a plot allotted to them on Kirk Road by the Government, but due to lack of funds the Society was unable to commence with their plans for a new museum. Mr Loveridge undertook the training and supervision of collectors of small mammals in Tanganyika. 1918 saw the publication of the first special supplement of the Journal, paid for by private subscription, on 'A check list of the Birds of Kenya and Uganda'. By 1919 the Journal was still being printed in England at a substantially high cost of production, however, the Committee agreed that the standard should be maintained as the Journal was the only return many members received from their subscription and they also realised its value in exchange with other scientific publications.

The Society was still without government recognition though there was little doubt the the museum could become a teaching centre and therefore should receive State Aid. Government departments were using the collections especially the Medical Department which was determining the distribution of plague spreading rodents. The Journal No.16 of 1921, though small in size, contained several interesting articles including, 'On a Collection of Birds from Turkana land' by Dr V.G.L. van Someren and Part 1 of 'Notes on East African Mammals' by Mr A. Loveridge. In 1921 construction was sufficiently advanced on the new museum building site on Kirk Road to allow the transfer of some of the collections. The new museum was officially opened in February 1922 by His Excellency Sir Edward Northey. The President of the Society, Sir Charles Bowring outlined the history of the society and the museum was then declared Open to the Public at a fee of one shilling while members gained free entry.

The Society and Museum existed but could not progress due to lack of Government and Municipal support so several members of the Committee undertook voluntary duties including that of Honorary Curator and did considerable work, but many specimens were damaged or destroyed for lack of proper preservation and storage.

Progress in 1924 was slow but steady with an improvement in the finances of the Society, the most noteworthy being the final settlement of the debt for the Museum building. This was mainly due to the accession of a special fund resulting from the exhibition of a big game film presented to the Society by Mr Martin Johnson, which proved to be a useful source of revenue for years to come.

At the first showing of the film the Society was greatly honoured by the presence of Their Royal Highnesses, The Duke and Duchess of York who were in Kenya on a two month's visit. Several Government officials, members of the Diplomatic Corps, members and friends also attended and through the help of Sir Robert Coryndon the government gave the Society a grant of Sh.3000 to help in the advancement of the Museum. After the death of the late President of the Society, Sir Robert Coryndon, a meeting of representatives of public bodies was called to discuss the feasibility of establishing a memorial to commemorate Sir Robert's sterling services to the country. It was decided that the memorial should take the form of an addition to the Museum building to be known as the Coryndon Hall.

In 1925 there was a publication in the Journal of Part 1 of 'The Birds of Kenya and Uganda' by Dr V.G.L. van Someren and Part 1 of 'The Butterflies of Kenya and Uganda' by the same author and the Rev. Canon K. St. Aubyn Rogers. These were acclaimed by many overseas institutions and are sought after by collectors today.

During 1926 Dr L.S.B. Leakey had been carrying out valuable research work in connection with Prehistory in Kenya and his discoveries were of extreme anthropological and ethnological importance. The Society felt that such work should be encouraged and that by the giving of government grants, through the Society, some of the material collected, or their exact replicas, could be secured for the Museum and the country as a whole.

After considerable negotiations with the government the Society was given a site of 15 acres on Ainsworth Hill (now Museum Hill) and the Coryndon Memorial building was erected by the Coryndon Memorial Trust. The Society was given the responsibility of utilising this building for the purpose of a Museum and to allow public access to it at reasonable times each day. The buildings and the plot were to be surrendered in the event of it ceasing to engage in Museum activities. The general structure of the Coryndon Museum, now the National Museum, was completed in September 1929 and the Society's collections were transferred to the new building in November of the same year. An important donation received in 1929 was a large collection of small mammals by Mr A.B. Percival which was of special value as it had, from time to time, formed the basis of several scientific papers on the mammals of Kenya.

With the provision of better facilities a large amount of work was done on systematic collections and the exhibits. New show cases were made in the Museum workshop, many of which are still in use today. The Ethnological Section received valuable material collected by Sir Fredrick Jackson and presented to the Museum by Lady Jackson. Stone Age culture was exhibited by material collected by Dr L.S.B. Leakey and deposited on loan by the Kenya Government. Journal No.36 was published in late 1929 and contained five plates of the new museum showing the entrance, the main hall and staircase looking much as they do today though many additions were made later.

The new Museum was officially opened on 22 September 1930 by Sir Edward Grigg who paid special tribute to the memory of Sir Robert Coryndon, one of Kenya's great benefactors and a staunch supporter of the Society during his time as Governor. A section of the Museum was provided for the display of insects which had an important effect on the economy of the country, such as locusts, mosquitos and insects destructive to timber. Outstanding phenomena such as polymorphism, mimicry and protective colouration were demonstrated. The gradual evolution of mimetic patterns from primitive forms were also strikingly exhibited.

Series of fish illustrating species of economic value from Lake Victoria were displayed while reptiles and amphibians were portrayed by coloured plaster casts, largely the work of Mr Alan Turner.

The study collection of birds representative of the avifauna of Kenya and Uganda was the finest of its kind in any museum. A large aviary was presented to the Society by Lady MacMillan in 1936 and was erected at the back of the Museum and was stocked with 50 local species of birds. The aviary was subsequently relocated in the Snake Park and continued to contain a variety of birds. It is now located at the International Primate Centre in Karen where it houses a group of Colobus Monkeys.

The Botanical Section, created to deal with the botany of the country, was greatly honoured by the visit of Sir Arthur Hill, Director of Kew. His visit did much to strengthen the cordial relationship existing between the Society and the Royal Botanical Gardens. The Herbarium was growing rapidly and carefully collected material and data was dispatched to Kew for identification.

A note of interest to many members will be the fact that Miss Priscilla Allen was elected a member of the Society in 1932. Miss Allen was an active member and during her years with the Society performed the duties of Honorary Librarian, Honorary Secretary and for many years served as a member of the Executive Committee; she also formed the Uganda branch of the Society.

The task of running a public Museum was not simple, the grant-in-aid from the Government and Municipality not being sufficient the Society applied for assistance to the Carnegie Corporation and, as a result, a grant of Sh.20000 was made and used for permanent exhibition cases and storage cabinets, these were installed in 1935. The Society was running the Museum on behalf of the Trustees but was severely handicapped by lack of understanding and the absence of strong backing though it had agreed to assume the responsibility of organising and running a Museum in the Coryndon building. It was felt that such an institution should form an integral and important part of the life of the entire community of the country so that irreplaceable data should not be lost for future generations.

Much of the material displayed in the large building was on loan and in order to replace this material, funds were needed to employ collectors, meet travelling expenses and the cost of preparing and mounting the material. The British Museum (Natural History) continued to give help by identifying many thousands of insects, the assistance given being much appreciated in view of the fact that the Society's collection were not part of a State organization.

A magnificent pair of elephant tusks, secured for the Museum as the result of His Excellency the Governor's personal interest in the Society were deposited on permanent loan. These tusks, weighing 170 and 172 lbs. respectively, remained government property and are still on view to the public near the main entrance to the Museum.

In 1937 Dr and Mrs Leakey gave private demonstrations on archaeological matters. Material augmented and re- arranged by Dr and Mrs Leakey now stand as the finest of its kind in any museum. In 1937, criticism of mismanagement, occasioned by increasing financial and other difficulties, made to the Society by the government necessitated a Committee of Enquiry. Its report formed the basis of discussion at a Special General Meeting and subsequent negotiation with the government on the future running of the museum. After considerable discussion the government approved the re- organisation which provided for the establishment of a Legal Charter under which a Board of Trustees and a Board of Management were to be nominated. The board of trustees was to assume control of the Museum and its scientific collections, but Society representation on both the board of trustees and the Management Committee was assured. The Society had nursed the Museum from infancy to a state of growth, when for economic reasons it became necessary for the state to assume control. Special thanks were recorded to Mr Humphrey Slade for advice and opinions on legal matters connected with finances.

Towards the end of 1937, funds were made available for field work, particularly in connection with botany. The area of the Chyulu Hills which was virtually unexplored was chosen for this long-awaited field work. The members of the expedition included Mr Peter Bally, Mr Allen Turner as general field assistant, Dr V.G.L. van Someren and his son Desmond and Mrs Bally (later Mrs Joy Adamson) joined the party. Science benefited by over 1,300 botanical specimens, numerous photographic records, soil samples and native names of plants. The Chyulul Hills are still vastly attractive and the Society has arranged several camps there for its members, and still continues to do so.

Government and Municipal grants were kept to the promised level and the Society was asked to manage the Museum until the end of January 1939 to allow for the appointment of a board of Museum Trustees of Kenya under the new ordinance. The cessation of Museum activities necessitated re-organisation of the Society's constitution which was drawn up and submitted for approval. As a result of negotiations the Society handed over all its Museum assets except the Library, in return for an annual payment of Sh.2000 for 15 years. This sum represented about a tenth of the estimated value of the assets so transferred, but the Society did this willingly in order to give every assistance to the new trustees in building up the Museum services. The Society, for its part, retained the right of access to the workrooms and study collections. The Society was also granted the right of nominating two members to the board of trustees, such members to represent 'Scientific Interests'. The use of one room in the Museum was given to house the Society's valuable library, and members had free access to it at all normal times. Dr V.G.L. van Someren became the first Director of the Museum.

The Society no longer had the burden of administering the Museum and the time seemed right to start on a more active programme. Dr Leakey as a member of the Committee, proposed that a series of lectures or discussions be started. In order to start the ball rolling, he offered to give the first in the series. This was accepted with alacrity. A sub-committee was formed to look after details and prepare a syllabus.

In 1943 it was proposed that the name of the Society should be changed from 'East Africa and Uganda Natural History Society' to 'East Africa Natural History Society' this was approved unanimously. The year was a dull one with little activity, but despite the preoccupations of members of the Committee, it never had any difficulty in obtaining a quorum at its meetings.

In 1945 Dr Leakey gave a most interesting lecture on the work done at Olorgesailie. This included an account of the lake deposits, the people who had inhabited the area and the animals which had lived at the various levels excavated. He stressed the importance of the site and the finds already made, and expressed great hopes that a small museum would be set up, as well as weather-protected excavations prepared to interest the public. All this has been done and the site is now run by the National Museums of Kenya. It is a popular place visited by many Society members and the general public. Apart from its archaelogical interest, it has a good dry country bird population and several species of mammals. Botanists and entomologists also find much to interest them.

Dr V.D. van Someren, the Honorary Secretary of the Society in 1946, proposed that a bird ringing scheme should be instituted. This met with the instant approval of the Committee. However, it was not until 1960 that the Bird Ringing Scheme came into being, this is still a valued part of the Society's activities and is now in the able hands of Mr Graeme Backhurst, the ringing organizer

By the end of 1946, Mr John Karmali had joined the Society, he later became a very active member of the executive Committee and was a most able Chairman of the Society for many years. In 1971 the Society proposed to publish a form of newsletter bulletin to contain short nature notes and records received from Members, to ensure rapid publication of such material. The Journal meanwhile, had an altered format and was published as 'occasional papers'. In 1961 the name of the Journal had been changed an agreement having been reached with the Museum Trustees and the Society for the production of a joint journal to be entitled the Journal of the East Africa Natural History Society and the Coryndon Museum, this was changed again in 1964 when the Museum became the National Museum and is now entitled the Journal of the East Africa Natural History Society and National Museum.

Miss Priscilla Allen joined the Committee early in 1950 and became Hon. Secretary, as the then Secretary Mr Collins was leaving, in addition she became Hon. Librarian. The Society's Library had increased enormously and held many valuable books. With a view to safeguarding these the Committee decided to institute a 'Reserved List'. The then President of the Society, Mr A.M. Champion resigned in early 1950 due to ill health and died in May 1950. In his Will he left the Society the Gold Medal awarded to him by the Royal Geographical Society, his Africana books and a financial bequest which became the Champion Fund and has been used over the years to assist various projects undertaken by members of the Society.

Dr T.R. Odhiambo joined the Society in 1952, this was the beginning of a long association and he later became a Life Member. Professor Odhiambo now heads the International Centre for Insect Physiology and Ecology (I.C.I.P.E.).

Miss Fleur Grandfaun (now Mrs Fleur Ng'weno) became Hon. Secretary in 1963. Her work for the good of the Society has been invaluable and perhaps she is best known to present members and the public for her most popular 'Wednesday Morning Bird Walks'. Records of birds seen on these excursions have been kept by an official of the Ornithology Department of the National Museum. She is currently Vice Chairman of the Society.

In 1964 Mr John Kokwaro joined the Society as a Junior Member. He served on the Executive Committee for many years and became Chairman of the Society, succeeding Mr John Karmali as Chairman and stood down in 1989. Professor John Kokwaro is currently Chairman of the Botany Department University of Nairobi.

The Society has worked for the preservation of critical habitats; smaller areas without large mammals but just as vital from an ecological standpoint as the National Parks. One such habitat has now been established to preserve marine life along the Kenya Coast. January 1967 saw Part 1 of 'Marine Botany of the Kenya Coast' by W.M.E. Isaac published in Journal Number 114. His completed work is available from the Society Office in Journal parts.

In August 1967 Mrs Rena Fennessey famous for her bird paintings, book illustrations and designs for several series of East African postage stamps, donated to the Society an attractive sketch of a Long-crested Eagle for the cover of an information leaflet. This has become the Society's emblem.

Mr J.S. Karmali became President of the Society in March 1969 and Mrs Lise Campbell , a long time member and also a member of the Executive Committee, became the Functions Organiser at this time, a task she fulfilled for fourteen years, she arranged the many camping trips and the monthly lectures held in the Ford Hall of the Museum; it was largely due to her efforts that so many members, many of them new to the country, were able to enjoy visiting places in Kenya that they would not otherwise have had the opportunity to see. She resigned as Functions

Organiser in 1983 but still remains an active member of the Executive Committee.

In 1970 Miss Priscilla Allen was once again elected Hon. Secretary of the Society, and combined those duties with that of Hon, Librarian. She resigned from the secretaryship in 1976 and Miss Denise Angwin took over, this necessitated moving the secretarial office out of the Library. Mr Richard Leakey, the Director of the National Museum, kindly allowed the use of a room as the Society Office and no time was lost in moving in and the voluntary staff tried to keep this open for the benefit of members during normal office hours.

At the National Museum's 50th Anniversary Festival held in June 1979 the Society was able to put on a fine display of its activities and this was much admired and helped to increase membership.

The National Museum, housing our only national zoological and other collections is a major educational asset to schools. As East Africa is the meeting ground of several faunae, the Museum has had to assemble large study collections for taxonomic research and its collections are therefore, Pan African in character. Hence, it has more to offer the public in research material than any other museum in Tropical Africa. East Africa is at present the focus of world interest in matters of Wild Life Conservation; in this field the Museum is the ideal centre to disseminate by visual education and publications a knowledge and understanding of the fauna on which this conservation depends. Each year, increasing numbers of distinguished scientists from all over the world visit the Museum, and it is also a major tourist attraction. Most visitors to Kenya first visit the National Museum to learn something of what they can see in Kenya before actually setting off on safari to see it.

As can be seen from this brief history, the East Africa Natural History Society has had the good fortune to have been associated with many scientists who have attained international repute. Arthur Loveridge, later of the Museum of Comparative Zoology at Harvard, became a world authority on snakes. Dr V.G.L. van Someren was a well known authority on East African birds and insects. Mr Peter Bally, a botanist, in an effort to help farmers and agricultural officers wrote a pamphlet on 'Kenya Weeds' and made flora surveys of both the Nairobi and Tsavo National Parks. John Williams, the ornithologist, apart from his many scientific papers is best known for his hand book 'A Field Guide to the Birds of East and Central Africa'. Together with Dr L. Leakey, he was largely responsible for the declaration of Lake Nakuru as a bird sanctuary. Its thousands of flamingoes are now acknowledged to be one of the bird wonders of the world. One of our best known members was Dr L.S.B. Leakey whose permanent memorial is the National Museum. Over the decades he and his equally distinguished archaeologist wife Mary, with unflagging enthusiasm and persistence, dug in back-breaking conditions under the equatorial sun in search of man's ancestors. Their labours have been rewarded by a series of world-shaking discoveries. As result of their work, East Africa has come to be recognised as the homeland of Man and sites, such as Olduvai and Olorgesaile, have become centres of pilgrimage to tourists from all over the world and have given us greater knowledge of the environment, way of life, tools and food habits of our earlier hunter, food gatherer ancestors than anywhere else in the world. Visitors to the gallery of Palaeontology and Prehistory at the Museum may see the result of their work.

In 1980 two major works were eventually published. Mrs Jean Hayes who was the Hon. Editor had brought to a satisfactory conclusion the task of getting the 'Breeding Seasons of East African Birds' published after dealing most competently with the many problems that had arisen with the printers. The Ornithological Sub-Committee produced 'Birds of East Africa', saw it through the press and raised funds through donations and advance sales to pay for publication, the Sub Committee then handed over to the Society, for it to market, approximately 3,300 copies. The book having been paid for, most of the money received from its sales would be profit and it had been resolved the 75% of this would be earmarked for ornithological research and publication. The 'Check List of the Birds of Kenya', an off shoot of the major publication had also been published during 1981. The office bearers and members of the sub- committee deserved special praise for their efforts, especially as 'Scopus' and the 'Annual Bird Report' had also continued to appear regularly.

The Museum kindly gave the Society almost half the accommodation previously occupied by the Department of Entomology when that was moved too. With the vacating of the old offices and the adjacent workshop downstairs, space had become available to enlarge the joint Library, an objective that had been desired for many years. The funds for this expensive project had been made available through the kind generosity of the Canadian High Commission in Kenya who made a grant of Canadian $25,000 (Sh.216,485). The Society was most grateful to the High Commission for its help and co-operation.

As will be remembered, in 1939, when the Society handed over its Museum to the then Kenya Government, an agreement was drawn up which made it clear that the Society's valuable and extensive Library was excluded from the hand over and remained the separate property of the Society.

The Coryndon Memorial Museum (now the National Museum) was permitted to have full use of the Library and its contents, in return for which, it would look after and maintain the Library, allow full access to members of the Society to the Museum, its study rooms, laboratories and the Library. A close liaison has existed ever since between the Society and the Museum.

Notable personalities such as Mr John Karmali continued to render selfless service to the Society as Chairman an office he held until 1983 when he stepped down and Prof. John Kokwaro was elected Chairman. The Society is most grateful to Mr Karmali for his leadership.

The Society continued to flourish and in 1983 Dr S.G. Njuguna was elected Treasurer of the Society and did a very commmendable job in streamlining the Society's accounts. In the same year the Society was also appointed sole distributor in tropical Africa for the parts of the 'Flora of Tropical East Africa' by the publishers, the Royal Botanic Gardens of Kew, England. The Society receives 25% commission on each part sold.

In May 1983 the Society was privileged to receive a very generous donation of Sh.38,904 from Mr Hassan Rattansi, Chairman of the Rattansi Educational Trust towards the purchase of a new Gestetner duplicating machine. A letter of thanks was sent to Mr Rattansi by the Chairman of the Society

Though there were fewer volunteers during 1984 and 1985 due to some of the stalwarts having left the country, the popular Wednesday morning bird walks continued to be well attended. Journal parts continued to be published with the help of a very active Editorial Sub-committee which consisted of Drs Jim Hebrard and Henk Beentje assisted by Dr Mark Ritchie. The Society continued to conduct the monthly evening lectures and organise camping trips.

The Executive Director of the National Museums of Kenya presented the first annual donation of Sh.20,000 to the Society towards the costs of publication of the Journal in 1986 and at the same time the Library continued to function smoothly with ample reading space, more new reading material and improved management. The Executive Committee requested the Librarian to attend its monthly meetings as an ex-officio member to assist in making recommendations on the spot. The relations between the Society and the National Museum have continued to grow from strength to strength.

1988 was a very successful year as three parts of the Journal had been published at the beginning of the year. The Bulletin continued to appear regularly on a quarterly basis and the Newsletter was produced each month to acquaint members of forthcoming lectures and trips. The membership reached a record figure thanks to the efforts of Ms. Lorna Depew the Hon. Secretary. The Executive Committee worked extremely hard on their respective assignments with great devotion and committment. 'Scopus' and 'The Annual Bird Report' continued to be published by the Ornithological Sub-committee

In May 1989, Professor John Kokwaro stepped down as the Chairman, the Society is most grateful to Prof. Kokwaro for the services he rendered to the Society. Professor Steven Njuguna who has served in various capacities in the Executive Committee including Treasurer, and who has been a member of the Society for over ten years was elected Chairman of the East Africa Natural History Society. Professor Njuguna is currently working with the National Museums of Kenya as Associate Director, Botanical Sciences and Head of Biological Resources Programme.

Special thanks go to the former Director of the National Museums of Kenya, Dr Richard Leakey for all the assistance he has given to the Society. The Society and the National Museums continue to enjoy a good working relationship.

As we celebrate our 80th Anniversary, special tribute is paid to all members past and present of the Executive Committee for their tireless efforts in uplifting the standards of the East Africa Natural History Society.

Compiled by:
Mrs Peris Njuguna, Publicity Organiser, East Africa Natural History Society.

A BRIEF EARLY HISTORY OF THE NATURAL HISTORY SOCIETY AND SOME PERSONAL REMINISCENCES

The East Africa Natural History Society celebrates its eightieth year of existence this year 1989 and is probably one of the first registered Societies in the country.

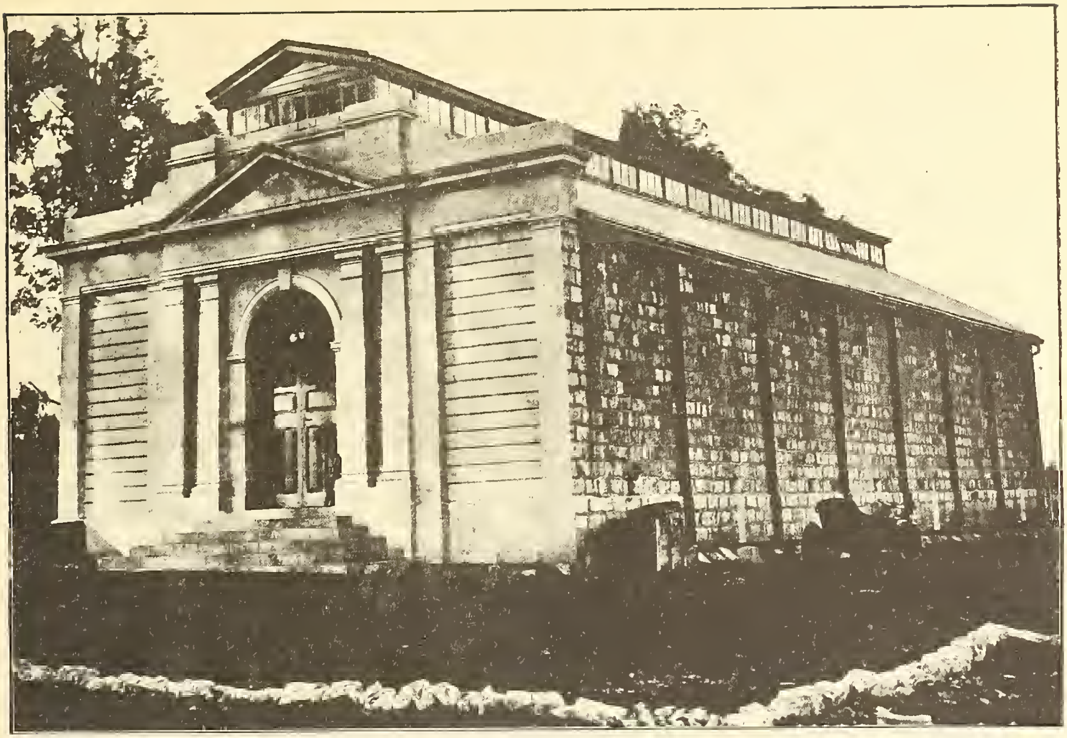
On 25 March 1909 ten gentlemen gathered at the residence of the Lieutenant Governor, Sir Percy Girouard 'for the purpose of considering the formation of a Natural History Society for East Africa' this Society became the East Africa and Uganda Natural History Society with Mr F.J. Jackson, later Sir Fredrick Jackson Governor of Uganda, as its first Chairman and President.

One of the objectives of the Society was to gather specimens and start a museum. The minutes of the meeting of 9 September 1909 read 'Resolved, the Hon. Secretary write to the Municipal Committee asking whether they considered it advisable that the Society should apply for the reservation of the corner plot on Government Road (now Moi Avenue) for the purpose of erecting a museum or whether they think that the Government should be asked to reserve a plot in a more central position, say on 6th Avenue (now Kenyatta Avenue), for the eventual erection of a large building and that the site suggested by Mr Hobley near the Provincial Commissioner's Office (today an Historic Site) be decided upon for the building to be erected by Messrs Jeevanjee'.

The annual subscription was Rupees 15. Minute 2 of the meeting of 19 November 1909 reads 'R.5 of the annual subscription of members shall be allotted to the local Committee for the purpose of forming and maintaining collections and that the remaining R.10 to go to the coffers of the Society'. The Committee confirmed the action of the Hon. Secretary 'in forwarding a letter dated 30 October to Messrs Jeevanjee and Co. on behalf of the Society, agreeing to rent a building which they have undertaken to erect on one of the sites near the P.C's office ..... the rental of the building to be R.37.50 a month'.

The plans for the building were drawn up by Mr Rand- Overy and the building, a room 30 by 25 feet with a smaller office/committee room were ready for occupation on 16 August, 1910.

The first Curator of the museum was Mr T.J. Anderson, 'Bug' to his friends, Senior Entomologist of the Agricultural Department. Succeeding curators were Messrs Cunningham and Battiscombe (Conservator of Forests). By 1914 it was agreed to appoint a full time Curator and Arthur Loveridge came from the Cardiff Museum however, due to War conditions he did not take up his appointment until 1915 and so by December 1914, Mr Allen Turner took over to allow Loveridge to join the forces.



An old photograph of the New Museum, The Coryndon Hall built with funds raised by the Coryndon Memorial Fund

Plans for a new building in Kirk Road (where now stands the Serena Hotel) were complete but funds were low however, Messrs. Hartz and Wood offered to fund the building in the first place. The building was 70 x 30 x 20 feet and construction commenced in July 1921 and it was officially opened in February 1922 by the Governor, Sir Edward Northey with Mr J. Gedye as Curator. My father Dr V.G.L. van Someren was Hon. Secretary of the Society from 1915.

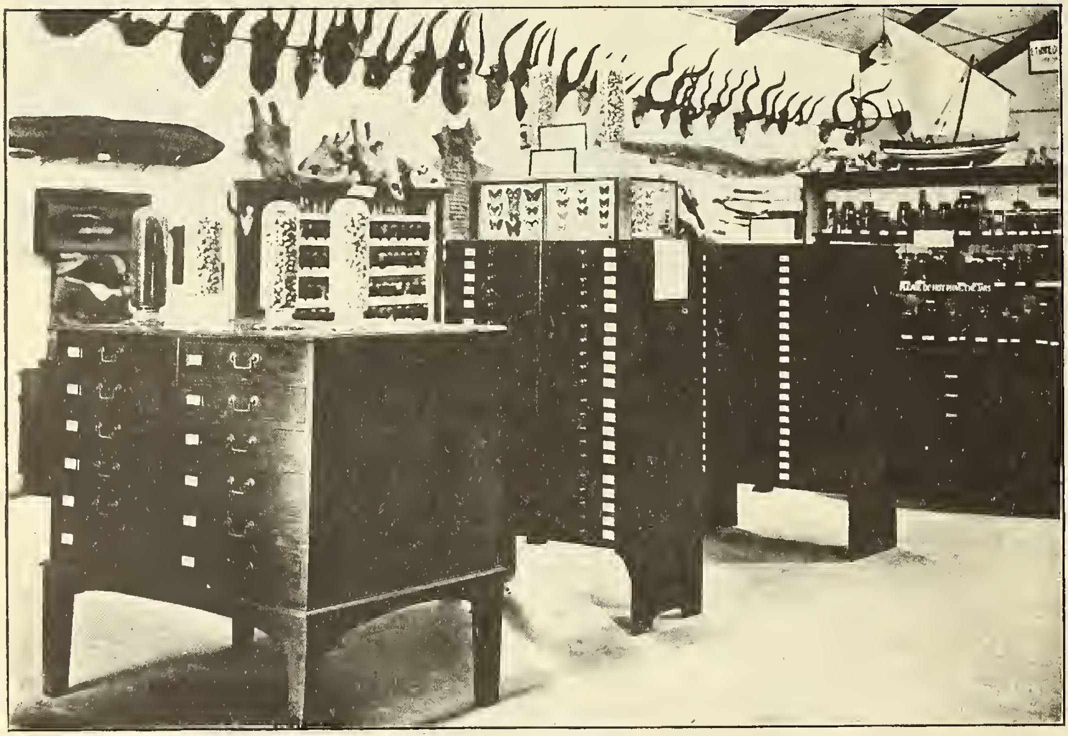
Sir Robert Coryndon became Governor of Kenya and was a keen naturalist and supporter of the Society, on his death in 1925 the Society opened a fund to build a wing to the Museum to be known as the Coryndon Memorial however, Government in its town planning scheme wished to take over the building in Kirk Road which was valued at Sh.4500 but offered another site on Ainsworth Hill (now Museum Hill) so named after John Ainsworth C.M.G. whose official residence was on the Hill.

On 6 March 1925, the Acting Governor, Sir Edward Denham, called a meeting of all influential people representing the Government and the public to discuss a Memorial to Sir Robert Coryndon and so to raise funds for such a building. The Society naturally participated whole heartedly in fund raising (I have copies of the appeal). Finally a site for the new Museum was chosen on Ainsworth Hill. A further appeal was made on 7 February by Sir Edward Grigg the Governor who wrote "If that proves successful it will become possible at once to erect a single museum, the central hall of which would be built with the Coryndon Memorial Fund and named Coryndon Hall'.

The Coryndon Memorial Museum was officially opened on 22 September 1930 by Sir Edward Grigg and the Society moved its collections. The Society was now firmly committed under the Agreement with the Coryndon Memorial Fund and Trustees, the Government and the Town Council.

My father was still Hon. Secretary of the Society but also Hon. Curator of the Coryndon Museum but lamented that the Society had as a result 'sold its birthright' - the Society Museum - to a board of Trustees. I believe the Society elected a member to serve on the board.

To-day folk tend to forget that the Central Hall of the National Museum is the Coryndon Memorial Hall built with funds from the sale to Government of the Kirk Road Museum, the property of the Society. Today the Society has its offices in the Memorial building, a room that used to house the Bird Collection and where the Society Committee meets to this day for its deliberations.



This photograph shows part of the interior of the new Coryndon Hall,
with cases of specimens along the west wall

The second objective of the new East Africa and Uganda Natural History Society was to publish a Journal and this they did . I have a copy of Volume 1 No.1 of January 1910 and as a frontispiece it has a colur plate of Hubbard's Francolin which accompanied an article by Sir Fredrick Jackson.

Looking through my back numbers of the Journal I note many names of folk I recall as members of Committee, Presidents but also the Patrons, the Governors of Uganda and Kenya. There were Honorary members including - Colonel the Hon. Theodore Roosevelt, Dr Mearns, Kermit Roosevelt and Cherry Kearton - there were 65 members in 1910.

Ainsworth House on Ainsworth Hill (now Museum Hill) and the site of the National Museum, was my fathers official residence from 1915 to 1940. The house stood where today stands the Ford Foundation Hall and was where I was born.

It was Ainsworth who planted all the gum trees, dracaena, popcarpus and even oaks in the grounds. As a child I roamed the area collecting butterflies and dabbling in the Nairobi River then a crystal clean stream below the bridge.

My father had his dentist's surgery and when the Coryndon was built spent his spare time in the museum. Like all colonial children I was banished to school in the U.K. only returning in 1933 where naturally I found myself in my spare time in the Museum and joined the Natural History Society. I have seen the growth of the National Museum complex over these many years.

I became Hon. Secretary of the Society in 1938 and my father was Vice-President. Then I was Editor of the Journal but not for long as in 1939 I joined up with other members of Museum staff on the outbreak of war.Committee meetings were still being held at that time in the back room of the Museum, now the Museum Library. Alas, I think I am one of a very few members left of 1939. Amongst committee members, those I remember best were John Gedye who spent his spare time with the beetle collection; Allen Turner who prepared exhibits; Donald MacInnes who did jigsaw puzzles with chips of prehistoric elephant teeth; Humphrey Slade Q.C. our Legal Adviser and J.R. Hudson of the Vet. Lab. After a meeting we would all adjourn to the lounge in Ainsworth House with my father for a drink and watch the antics of the Tommy gazelle and the Grey Duiker which loved carnations. I vividly recall Njuguna, the diminutive Kikuyu museum doorkeeper and ticket collector referred to in the book 'Kamongo' as a fierce Maasai Warrior.

Finally, I would like to go back to the Journal and the Bulletin of the Society for it was by exchange of the Journal that the Society was able to build up its comprehensive Library. At one time this was a bone of contention between the Society and the Museum and led to many sometimes heated discussions at Committee meetings but it was the Society publications that put the Society on the international scientific map. Not all articles have to be 'high falutin' but may be interesting anecdotal notes and this is where the Bulletin comes in. It is your notes that are wanted, your observations which should be recorded, and this will assist the 'new look' Bulletin of the Society.

G.R. Cunningham van Someren, Box 24947, Nairobi

NOTES ON THE KIGOGO FOREST, MUFINDI, TANZANIA

The Kigogo forest (8°40' S, 35°15' E) is an extensive area of escarpment forest ranging in altitude from 1,800m to below 1,500m and covering the Kigogo and Nyarua Kiseu river catchments in the southern Uzungwa mountains. The higher altitude parts of the forests at the top of the escarpment are secondary, and cultivation ridges can still be seen. The bamboo *Arundinaria alpina* forms extensive stands in these areas. The lower parts of the forests on the escarpment appear less disturbed. Both upper and lower forests contain species of interest.

Before 1960 buffalo were common in the forest, which still contains the remains of many buffalo pit-traps, though none exist there today. Similarly Harvey's red duiker, suni and leopards were common but extensive hunting and trapping means that they are rare now. Blue monkeys occur, but Black and White Colobus have never been seen.

Kigogo is the type locality of the bird *Francolinus squamatus uzungwensis*, and it is likely that the rare *Dryocichloides lowei* is also present. Butterflies of interest include: *Acraea vuilloti, Chondrolepis obscurior, C. similis* and a new species of *Anthene*. Rare and interesting plants include: *Aframomum laxiflorum, Afrothismia insignis, Allanblackia stuhlmannii, Bersama rosea, coffea mufindensis, Oxyanthus lepidus* s.sp. *kigogoensis, Psychotria megalopus, Stolzia christopheri, S. leedalii* and a tree Anonaceae that has yet to be placed to genus.

Trees in the upper part of the forest include: *Albizia gummifera*, Annonaceae = Ede 65, *Aphloia theiformis, Arundinaria alpina, Bersama abyssinica, Bridelia brideliifolia, Cassipouurea gummiflua, Cryptocarya liebertiana, Ilex mitis, Macaranga kilimandscharica, Maytenus acuminata, Nuxia congesta , Ochna holstii, Parinari excelsa, Phoenix reclinata, Pittosporum viridiflorum, Podocarpus, Rapanea melanophloeos, Rytigynia lychenoxenos, R. uhligii, Syzygium guineese* s.sp *afromontanum, Schrebera alata, Vepris stolzii, Xymalos monospora.*

Trees in the lower part of the forest include: *Allanblackia stuhlmannii, Cylicomorpha parviflora,Chrysophyllum gorungosanum, Garcinia volkensii, Galiniera saxifraga, Myrianthus holstii, Neoboutonia macrocalyx, Polycias fulva, Strombosia scheffleri.*

The Kigogo Forest marks the southern end of the species and endemic rich Eastern Arc mountain forests and so is of some scientific interest. The old secondary nature of part of the forests also makes them interesting for the study of natural forest regeneration.

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FURTHER NOTES ON LUHEGA FOREST NEAR UHAFIWA UZUNGWA MOUNTAINS TANZANIA

On our first visit to the Luhega Forest below Uhafiwa village (8°30'S, 35°51' E) we were unable to spend any length of time expoloring the forest on the escarpment slopes. We have subsequently had the opportunity to revisit the area and were able to descend the escarpment to 850m in addition to seeing the forest edge at the confluence of the Ruaha and Kihanzi Rivers.

The path from Uhafiwa to the confluence of the Ruaha and Kihanzi rivers passes out of forest through shambas and then back into forest again. The path provides access to shambas on the far side of the Ruaha River, which are not being used at present. On the banks of the Ruaha and on a small island at the confluence, Eucalyptus trees have been planted to provide material for a footbridge across the river, though there is no bridge at the moment. The land on the southern bank of the Kihazi is used by people from Ukami. The forest on the path has a secondary appearance, though not with recent disturbance, similar to that described in our earlier notes.

The path down the escarpment is used as an access to the railway line at Chita. Not far from the Ruaha river crossing the path forks, the left hand fork leading directly through the forest over hilly country and ridges to the escarpment, and the right hand fork leading to cultivation to join again with the direct route on the escarpment at about 1000 metres.

The path leading directly through the forest climbs from 1200 metres to 1450 metres along ridge tops with many small poles and a high infestation with Loranthaceae characteristic of an early succession. In addition there are many large moribund *Agauria salicifolia* reminiscent of some parts of the University Forest Reserve at Mazumbai in the West Usambara, and which Dr. John Hall takes to be indicative of the remnants of an earlier successional stage. Trees on the ridge include: *Agauria salicifolia, Aningeria adolfii-freidericii, Aphloia theiformis, Bersama abyssinica, Cassipourea malosana, Drypetes gerrardii, Macaranga kilimandscharica, Parinari excelsa, Phoenix reclinata, Pittosporum viridiflorum, Rapanea melanophloeos, Schrebera alata, Trichoscypha ulugurensis, Xymalos monospora.*

At the start of the escarpment the path continues to follow a ridge and at 1300 metres *Allanblackia stuhlmannii* occurs with *Newtonia buchananii* and *Syzygium guineense* s.sp. *afromontanum.* At 1100 metres *Bequaertiodendron natalense, Filicium decipiens, Ixora scheffleri, Octoknema orientalis, Odyendea zimmermannii,* and *Rhodognaphalon* occur with *Schrebera alata.*

Following a pitsawyers path to a stream at 850 metres what appears to be *Sibangea pleioneura* is found with *Rawsonia* and *Deinbollia.*

The remarkable aspect of the escarpment ridges is the mix of phytogeographical elements. *Schrebera alata* is a dry afromontane species growing with a wet Eastern Arc endemic like *Allanblackia stuhlmannii* and *Octoknema orientalis.* Even more unusual is the presence of *Filicium, Odyendea, Rhodognaphalon,* and *Bequaertiodendron natalense* which are Zanzibar-Inhambane lowland elements.

It seems likely that the increasing distance from the Indian Ocean in comparison with other Eastern Arc mountains such as the Usambara means that the temperature is higher at a higher altitude allowing Zanzibar-Inhambane species to grow in a rainfall sufficient to maintain them. However, the dry season is long enough and the altitude cool enough to admit dry afromontane species.

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NOTES ON THE FOREST AT LUISENGA STREAM MUFINDI, TANZANIA

Luisenga stream on the Brooke Bond Tea Estate, Mufindi District, Iringa Region, Tanzania, 8°36'S 35°18'E, is a well collected locality containing some very interesting species. From Luisenga Dam at 1 830 Metres the stream passes through a forested valley with an irregular canopy about 10 metres tall, to disappear amongst rocks at 1700 metres during the dry season and reappear again to fall down the Mufindi escarpment.

The dry season is 26 weeks long from the first week in June to the fourth weeek of November, the mean annual rainfall is about 1600mm, and the mean monthly temerature is from 17.5° C in January to 13° C in July.

Trees and shrubs in the forested valley include: *Albizia gummifera, Allophylus chaunostachys, Apholia theiformis,Apodytes dimidiata, Bersama abyssinica, Bridelia brideliifolia, B. micrantha, Canthium oligocarpum, Cassipourea gummiflua, Chassalia parvifolia, Clausena anisata, Clutia abyssinica, Coffea mufindiensis, Cryptocarya liebertiana, Diospyros whyteana, Draceana laxissima, Eugenia* sp. nov., *Faurea saligna, Garcinia kingaensis, Ilex mitis, Kotschya princeana, Lasianthus kilimandscharicus, Macaranga kilimandscharica, Maytenus acuminata, M. undatus, Mystroxylon aethiopicum, Ochna holstii, Ocotea usambarensis, Olinia rochetiana, Oxyanthus speciosus, Pauridiantha paucinervis, Pittosporum viridiflorum, Podocarpus latifolius, Prunus africana, Psychotria zombamontana, Rapanea melanophloeos, Rawsonia reticulata, Rinorea angustifolia, Rutidea orientalis, Schefflera myriantha, Scolopia stolzii, Syzygium masukuense, Trichocladus ellipticus, T. goetzei, Xymalos monospora.*

At the edges of the forest is a scrubby thicket including the trees and shrubs: *Agauria salicifolia, Buddleja salviifolia, Choristylis rhamnoides, Dodonea viscosa, Halleria lucida, Kiggelaria africana, Myrica salicifolia, Rhamnus prinoides, Tecomaria capensis.*

Of interest at Luisenga are: the tree *Trichocladus goetzei* (including *T. dentatus*) which is only found on the Uzungwa and Rungwe mountains; the climbing bamboo *Pseudocoix perrieri* which flowered in 1988 for the first time in local memory and is now dying back; the orchid *Stolzia christopheri* which is only known from the Luisenga and adjacent Kigogo forests; an as yet undescribed species of *Eugenia* which is only known from the Luisenga; and the bird *Dryocichloides lowei* which is only known from the Uzungwa and Njombe highlands.

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FURTHER RECORDS OF MAINLY SMALLER MAMMALS FROM KENYA

An earlier note, Lewis (EANHS Bulletin 19 (2): 20- 22 June 1989) listed some records of the smaller and less commonly seen mammals of Kenya, which might find use in the compilation of a Kenya mammal atlas. This note concludes these data. All records refer to single individuals unless otherwise stated, and scientific nomenclature is omitted if already given in the earlier note. Further information on mammal distribution is given in the booklet Mammals of the world: an overview to accompany safaris in Kenya(1989. Nairobi: East African Ornithological Safaris Ltd.)

The Records

1) African Hare: road kill 24 km north-east of Timau on A2 road 22 July 1989; Jilore Track, Sokoke Forest 4 Sept 1989.
2) Unstriped Ground Squirrel *Xerus rutilis*: road-kill 10 km north of Namanga on the A104 road 19 June 1989; road-kill 14 km south of Kajiado on the same road 29 June 1989.
3) Striped Ground Squirrel: two feeding on the concrete verge of the main Nairobi - Thika A2 road, within 2 metres of the passing traffic, near the breweries at Ruaraka, at 4 pm. 15 July 1989.
4) Spring Hare *Pedetes capensis*: road-kill 14 km west of Narok on the B3 road 18 June 1989.
5) Black-backed Jackal: killed a young Thomson's Gazelle *Gazella thomsonii* with a c.5 minute throat bite , near Mara River Camp 8 July 1989; road-kill 21 km east of the C13/ B3 junction 2 August 1989.
6) Golden Jackal: pair 10 km south-west of Naro Moru 22 July 1989; pair just inside Chokaa Gate of Buffalo Springs.
7) Bat-eared Fox: road-kill 9 km south of Bissel on A104 road 29 June 1989.

8) Zorilla: seen from night game drives around Mara River Camp 8 July and 4 Aug. 1989; road-kill at Mai Mahiu B3-A104 junction 6 Aug. 1989.
9) Black-tipped Mongoose: road-kill 23 km north-west ofMtito Andei on A109 road 26 June 1989; one dashedthrough busy traffic on Waiyaki Way, Nairobi, at 2.30p.m. 30 Sept. 1989.
10) White-tailed Mongoose: road-kill 21 km south of Isiolo on A2 road 23 Aug. 1989.; road kill on main Mombasa road, near Mombasa Road Gate to Nairobi National Park 14 Oct 1989; one crossing Karen Road, Nairobi, at 9 pm 17 Oct 1989.
11) Caracal: road-kill 38 km from Namanga along C103 road 29 June 1989; adult carrying small rodent prey (? to cubs) Samburu Reserve 21 July 1989.
12) Hippopotamus *Hippopotamus amphibius*: 2 in the Tana River where it is crossed by the main A2 road bridge, south-east of Murang'a, 20 Aug. 1989.
13) Klipspringer *Oreotragus oreotragus*: on small rocky hillocks near Sarova Shaba Lodge, Shaba Reserve July 1989; on a small hillock by the side of the C12 road just to the south of Mara Serena Lodge, 1988-9.
14) Steinbok *Raphicerus campestris*: often seen along the dirt road running south-westwards from Naro Moru to the B5 road; also around Lake Naivasha, including Hell's Gate National Park.

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SPOTTED THICKNEE *BURHINUS CAPENSIS* IN ARABUKO-SOKOKE FOREST

The Spotted Thicknee *Burhinus capensis* is widely distributed in East Africa. It is widespread in the interior of Kenya, breeding during the period March-June or October-November. The species inhabits bushed grassland and dry woodland, usually below 2000 m in altitude. It feeds on seeds, small crustacea and molluscs obtained from the ground. The thicknee occurs in areas of low rainfall and is more independent of water than are other thicknees in East Africa.

There are no records of the Spotted Thicknee in the coastal plains of Kenya. Britton & Zimmerman (1979) had no record of the species in Arabuko-Sokoke Forest. Kelsey & Langton (1984) had no record of the Spotted Thicknee in the forest. However, one would expect a Water Thicknee *B. vermiculatus* wandering further inland from the shores of the Indian Ocean

On 26 August 1989, a team of ornithologists (six in all) from the National Museums of Kenya and the International Council for Bird Preservation (ICBP - Kenya) identified a Spotted Thicknee in Arabuko-Sokoke Forest.

The bird was seen at about 10.00 hrs on a dirt road along the eastern edge (Lowland rain forest) of the forest. The Thicknee walked along in front of the vehicle and was observed for a period of 13 minutes. All six observers confirmed the identity of the bird

Both the locality and the habitat (forest) of the bird were unexpected. However, the Spotted Thicknee is subject to local but not fixed movement patterns. The species may wander about considerably outside its range, especially outside the breeding season.

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EUROPEAN WHITE STORK AS THE OBJECT OF HOSTILITY

East Africa belongs to the wintering area of the European White Stork *Ciconia ciconia* during November - April (cf. Siemens et al. 1988). In the Baraton area, near Kapsabet flocks of approximately 200 birds have been observed in recent years migrating through and roosting in the trees of the Nature Preserve of the University of Eastern Africa (UEA).

In April 1988 one individual White Stork was involved in an accident at Kimondi. This large birds 102 cm in length (Williams & Arlott 1984) hit a power line and broke its carpal joint. As it could no longer fly, it was caught by the local people and brought some days later to the Biology Lab. of UEA. A check-up on the health of the creature revealed that the bird was able to live but was unable to fly. So it was taken to the backyard of our house where we tried to feed it with dried fish and pieces of meat. The stork however, was so upset at first that it refused to eat anything. Because the bandaging of the wing did not appear to be helping the recovery of the bird, I had to cut the broken wing at the joint between the metacarpals and carpals (see e.g. Pettingill 1970: 17).

Placed in a pen in the backyard, the stork survived more than a week just standing and drinking, losing weight all the time. Later on, it began picking up insects from the grass and when it was released from the pen, it walked round the gardens of the neighbouring houses and was doing quite well. At night it came back to roost in the pen. One day the stork crossed the fence into the pasture where cattle were grazing. As soon as the cows noticed the big colourful bird they started to move towards it.

They encircled the bird and attacked, trying to butt it on the ground. Fortunately for the stork, two biology students and I were on the spot, and we managed to chase the cows away and rescue the bird. A similar very hostile attitude was also shown by Crested Cranes *Balearica regulorum* feeding in the same field. They chased the White Stork, wings uplifted and trumpeting.

The European White Stork walking around picking up insects in the gardens was a very decorative sight and a good subject for photography on the UEA campus. After four weeks the bird disappeared and never returned. Some of the workers at UEA, living in the local village told me that the stork was found dead in the Kimondi Valley. The cause of death of this exotic bird remains unclear, dogs or people may have killed the victim unable to fly It is worth mentioning that the population of the White Stork in Europe has been increasing recently. Active protection by Man has helped, and in North-east Poland for example, the population density has reached the value of 30 pairs/100 km (Jacubiec 1985).

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VISITING SOKOKE FOREST BY NIGHT

Kenya's Sokoke Forest is famous because it contains two species of birds not found elsewhere in the world. One of these endemic species, Clarke's Weaver *Ploceus golandi* is relatively easy to find since it has typical weaver traits, i.e. it goes about its business openly, even extrovertly, in the full light of day. It is the only social weaver found in the forest (the similar and commoner Dark-backed Weaver *P. bicolor* is found in pairs and family groups), and is reasonably distinctive (for a weaver) even when not in adult male plumage. However, having said all this, the point should also be made that Clarke's Weaver is one of the great enigmas of African ornithology since,although it can be easy to see in Sokoke during certain months of the year (August to November seem to be best, although there are other sightings in other months), it completely disappears at other times and has never been found breediing.

Despite being less enigmatic, the second of Sokoke's endemic birds is more delightful, and difficult, to see.

For the Sokoke Scops Owl *Otus ireneae*, an exquisite carnivore standing only about five inches (12-13 cm) tall, lives in Sokoke's dense *Cynometra-Manilkara* forest and is active only at night. Mrs Morden's Owlet, as it was formerly known (and there will be a silver collection afterwards for the clear-thinking individual who ridded us of that drab appellation, which somehow lacks the appeal of Lady Ross's Turaco or, further afield, of Queen Carola's Parotia) aestheticaly a gem and, for those drear and unimaginative mortals indefatigably in pursuit of that drear and sterile possession, a large life-list, an irrepressible temptation - but how to see it?

There is no foolproof way but, for those in search of, say, a 70-80% success rate, the best method is to go into this forest at night with David Ngala, a Forest Ranger attached to the Gedi Forest Station, an expert in finding this owl. This forest station is on the left of the main Mombasa-Malindi road as you drive northwards, just to the south of the turning to Watamu. The postal address is c/o Gedi Forest Station, Box 201, Malindi.

A typical visit involves entering the forest with David at around 6.30 p.m. and driving along the Jilore track until the colour of the soil, visible in the headlights, changes quite abruptly to a distinctive red-brown. Then you get out of the car, switch off all the lights and listen, absolutely silently with bated breath, for the owl's rather tinkerbird-like hoo-hoo-hoo-hoo.. call, which is quite different from the soft trill of the Scops Owl *O. scops* so familiar in other parts of Kenya.

David then whistles an imitation of the Sokoke Scops Owl's call and, if one replies, walks up and down the track trying to get as close as possible to the bird, and to fix its direction accurately. These aims accomplished, he leads you slowly, carefully and above all quietly into the forest's dense tangles, stopping from time to time to whistle again, and trying to snake a way between the tangled trunks and saplings towards the calling bird.

Sometimes, such a circuituous and stealthy approach brings your excited party right up to a small tree from which the owl is plainly calling but, even though you are right next to it, you see nothing. Finally, after much creeping around with muted breath and much probing with torch beams, the diminutive, greyish form is seen, motionlesss perhaps only within a couple of metres of your incredulous gaze, at which point it either veers off into the gloom or remains perfectly still, relying on the superb camouflage of its plumage and - incidently - providing one of the greatest birdwatching thrills of a lifetime.

At other times, David displays a knowledge of his craft that numbs the mind, that turns even the most experienced birdwatcher into a fumbling novice. On these occasions, the group is probing through the forest towards calls that seem to be distant, when David signals a halt. You stand in silent blackness, a little bewildered and barely able to discern the tangled outlines of the enclosing trees, when David calmly lifts his torch, switches it on - and there in a small pool of light sits the owl. The expertise shown in that kind of approach to a diminutive, camouflaged, motionless bird, at night and in dense forest, is simply incomparable, almost supernatural.

Having raised your adrenalin with these accounts, provisos must be made. David is no more infallible than the next man, and some attempts, after what seem to be hours of slogging through tortuous vegetation, end in failure. Moonlit evenings seem to be the best, both in terms of having the owls (and other birds see below) calling, and of having a little ambient illumination to aid one's progress through the trees.

Some rather enterprising but naïve souls, witnessing David's example, have tried dispensing with his services and going it alone. With regard to this, the following points should be made.

Firstly, in a move to prevent the illicit removal of timber from Sokoke, the Forestry Department have put a locked barrier across the Jilore track, where it joins the main Mombasa-Malindi road. Motor transport is a necessity for visits to all parts of this forest except those adjacent to the main road, and the opening of this barrier can be arranged by visiting Gedi Forest Station. If you are in contact with David and he knows of your needs, he will expedite this for you.

Secondly, while it is reasonably easy to imitate the owl's call, it can take rather more savoir faire to hear the bird's replies, which may be just barely audible and also to accurately pinpoint their direction.

And thirdly, while considerable experience is needed to actually find this diminutive bird, even greater skill may be demanded in navigating one's way back to the Jilore track. Disorientation comes all too easily amongst the gloomy, similar trunks. David himself takes wrong turnings, and one or two recent parties attempting the venture alone, have come to grief. Amongst other fauna, Sokoke Forest contains elephants, pythons and superb black cobras; it is NOT a place in which to blunder around aimlessly all night!

Some members of the safari groups that David and I have taken into the forest claim to have been attacked by biting insects - and if the volume and sheer animal neuroticism of these complaints in any way represents a real trend than there could be a learned paper in the offing on the preferential attraction of biting insects to citizens of the U.S.A. - but I habitually wear shorts and no insect repellalnt, and have only minor problems.

It should also be realised that these nocturnal visits hold far more than the promise of the Scops Owl alone. Provided they are calling, the playing of a cassette tape of the Fiery-necked Nightjar's *Caprimulgus pectoralis* voice will have the birds circling over your head, plainly visible by torch light, in a matter of moments. The Barred Owlet *Glaucidium capense* can similarly be attracted by taped calls, but is less prone to actually show itself; it is perhaps better searched for with taped calls and David's assistance, by day. The African Wood Owl *Ciccaba woodfordii* is also in the forest, but I do not know if it will appraoch taped calls.

Finally, the nocturnal mammals that can be seen in the headlights during the journey along the Jilore track add another, very exciting dimension to these visits. In late August and early November of 1988, we saw a Caracal *Caracal caracal* at about 6.45 p.m.; and other sightings have included African Hare *Lepus* sp., genets *Genetta* sp. Greater Galago *Galago crassicaudatus*, Four-toed (Knob- bristled Forest) Elephant Shrew *Petrodromus tetradactylus* (the Yellow-rumped Elephant shrew *Rhynchocyon cirnei* is often seen while driving along the forest tracks by day) and African Civet *Viverra civetta*. Sometimes, large bats swoop and swish impressively just above your head, as you stand on the track listening for the owls.

It is best to write to David advising him of your visit well in advance, and then to go to see him at Gedi Forest Station as soon as you arrive in the Malindi-Watamu area. His personal and professional commitments permitting, he can accompany you to the forest on any evening, and sometimes during daytime on weekends. I have been unable to resist showing my gratitude in the time-honoured way.

All in all, even if the fabled owl is not found, this is a natural history experience not to be missed

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LETTERS TO THE EDITOR

Dear Sir,

I find it interesting that over the last week (1 - 6 June 1989) my wife and have seen and heard four different species of cuckoo in and around our garden over an area no bigger than a few hectares. We see and hear them on the same day, and often within short intervals or almost simultaneously. We live at the end of Ushhirika road in Hardy Estate, Langata, just beyond the Co-operative College. The vegetation consists of remnant natural forest with exotic species (jacaranda, gumtrees etc.), and open fields. The species are: Emerald Cuckoo, Red-chested Cuckoo (more than one individual) Klaas Cuckoo and Didric Cuckoo.

G. Dekker, Box 24129, Karen, Nairobi.

Adrian Lewis kindly agreed to write an explanation and answer to Mr Dekker's observation:

The occurence of this number of cuckoo species calling together within a relatively small area is not uncommon in Kenya, and can be explained by reference to two phenomena. The first apparent peculiarity here is that these four cuckoos should be living in such close proximity to each other. This is particularly the case for the Emerald, Klaas' and Didric Cuckoos, which are members of the same genus (*Chrysococcyx*) and, being such close relatives, might be expected to be taking similar food items and thus competing with each other for the available food resourses.

This kind of competition is a great waste of energy and feeding time for any organism, and is usually avoided by the organism in question being segregated in some way.

In birds, such segregation can be achieved within one habitat type, for example, differing food preferences (which may be reflected in slightly different bill shapes and sizes) and by foraging at different heights above the ground in the available vegetation (e.g. some species near or on the ground, some around human eye level, and others high in the canopies, i.e. vertical segregation). But many birds separate themselves from potential competitors by living in different vegetation types altogether, and the reason why the Dekkers have three reasonably closely related *Chrysococcyx* cuckoos in their garden is because this relatively small area contains at least three major vegetation types or habitats, i.e. (a) forest, (b) forest edge and (presumably some more openly wooded areas), and (c) open fields.

All three of these *Chrysococcyx* cuckoos can perch high in trees (i.e. they are not vertically segretated), but the Emerald Cuckoo generally prefers dense foliage including forest interior, Klaas' cuckoo is more a bird of forest edge and wooded (as opposed to forested) habitats, and the Didric Cuckoo is generally found in more open habitats still, e.g. open grassland with scattered trees and bushes.

The Red-chested Cuckoo, like Klaas', prefers forest edge and other rather openly wooded habitats but, being much larger than the *Chrysococcyx* cuckoos and not closely related to them it is in a different genus *Cuculus*, it takes different food items and can exist alongside them.

The second apparent peculiarity here is that these four cuckoo species should all be heard calling together. This is due to the fact that all four of these cuckoos do not build a nest of their own but, instead, lay their eggs in the nests and amongst the eggs of other birds which, instinctively believing the cuckoo's eggs to be their own, are then burdened with the task of incubating them and, subsequently, of bringing up the cuckoos' young. This not only wastes a lot of the other species' time and energy, but may also result in their own offsprings' mortality if the fledgling cuckoo pushes them or their eggs out of the nest. Since the cuckoos thus gain at the expense of the other species, this is a parasitic relationsship - called brood parasitism - in which the cuckoos are the parasites and the other species are the hosts.

All four of these cuckoos parasitise small songbirds, most or all of which breed during rainy seasons, when the increased abundance of moisture brings forth great quantities of insect and plant life upon which the songbirds' young are fed. Birds can anticipate the arrival of rains by sensing such phenomena as the increasing humidity of the air, and perhaps also by noting such features as increasing cloud cover and distant storms. Thus, even if rain is not actually apparent, small birds burst into a noisy bustle of territorial and courtship activity and, sensing both this and the changing climate, the cuckoos follow suit. Hence, for example, the Red- chested Cuckoo sings "it will rain" before the rains start (and at other times too), and is known as the rain bird. The cuckoos must breed at this time or not at all, since they do not construct their own nests nor (normally) display parental care.

The partial separation of the three closely related *Chrysococcyx* cuckoos by different habitat preference is probably reinforced by their having different host preferences too, i.e. by their each tending to lay their eggs in the nests of different species rather than, for example, all choosing to parasitise the Scarlet-chested Sunbird.

Adrian D. Lewis, 36 Lilymead Avenue, Knowle, Bristol BS4 2BX, U.K.

Dear Sir,

Birdwatching is indeed a hobby that can be carried out in nearly all places but the strangest place I have yet to come across is the Mission to Seamen Chapel in Mombasa. The Church has open grillwork along the top of the walls and this seems to attract birds to pop in and have a fly around. Mostly these are sparrows and thank goodness the holes are too small for the Indian House Crows but sometimes we have much more interesting visitors. Not long since we had a migrant warbler which flew in, walked round the parapet, had a good rest and then continued with its journey. The latest and, as yet, by far the most splendid visitor was a Malachite Kingfisher which decided to join us for Sunday morning service. It flew round the chapel for a bit and then decided to perch on the alter rail and listen to what was going on. Unfortunately it soon became very bored and went via the Communion table to the window behind the alter and there, of course, it got stuck. I am happy to say that we were able to rescue it after the service and show it the way out.

Marlene Reid, Box 80429, Mombasa.

REVIEW

TREES OF KENYA. By T.C. Noad and A. Birnie, 1989.
Published by the authors, P.O. Box 40034, Nairobi. pp. 308. Illustrated by line drawings and 18 colour plates.
Price to members on application to the Hon. Secretary, K.Shs 250.

The authors, both members of the East Africa Natural History Society, are to be congratulated on the production of this Field Guide, which complements the well-known Collins guides to birds, wildflowers, mammals and National Parks of the region. The book covers some 300 common trees and bushes; about half of those selected are introduced from outside Kenya. Trees likely to be found planted or wild in the Nairobi area are emphasized and the book will be of interest to both residents and tourists. By contrast the encyclopaedic Kenya Trees and Shrubs by Dale and Greenway, published in 1961 and now unobtainable, ommitted most exotics but included well over 1000 native species.

The book is A5 size (20 x 15cm), which is slightly larger than the Collins guides. Pages alternate between text and illustrations, the species described being shown opposite. The drawings by Ann Birnie show a relevant selection of leaves, flowers, fruit and the tree habitat, indeed, some of these last mentioned illustrations include background detail such as buildings, a telephone box, a bus stop and a wheelbarrow. Several are clearly drawn from specimens on golf courses. There are 18 plates of the more attractive trees such as the Cape Chestnut and the Fever Tree.

The text for each species, largely by Tim Noad, gives the current scientific name (indicating familiar older names too) and English and local names. The place of origin of introduced species is stated. A paragraph describes the tree, its habit, habitat and distribution in Kenya. The bark, leaves, flowers and fruits are then described. Interesting and informative notes on the species complete the text. We learn, for instance, that the Jacaranda was introduced to Kenya by the St. Austin's Mission. In October 1988 when I arrived in Kenya, there was a magnificent show on James Gichiru Road (formerly St. Austin's Road). The book has a brief introduction with notes on tree planting, a short glossary with diagrams and a combined index. Complicated botanical terms are avoided.

Like Dale and Greenway, Trees of Kenya treats families and then genera and species alphabetically. Except for a tabular guide to indigenous Acacias, there is no key. The problem for the relative newcomer in location of a tree in the book is best overcome by guidance, or accumulated experience of the book and the trees it describes. A visit to the Nairobi Arboretum, where the trees are labelled, is helpful here.

The book has a card cover, rather absorbent paper, and is sewn (with brown thread!) and glued. Not all copies are well bound and some of us may prefer to have two copies, one for the field, and one to keep indoors. I have noted two errors in proof-reading. The Introduction refers to 'them common trees', a phrase not likely to be uttered by either author. Secondly, *Hibiscus schizapetalous* should surely be *H. schizopetalus* which is how Dale and Greenway name it. The frontispiece is an attractive plate of the Wild Date Palm *Phoenix reclinata*. Strangely on page 212 a different drawing of the same tree appears in mirror image.

Both text and illustration disclose the personal interest of the two authors in their subject and the many hours of original research spent. The result is a book which can be thoroughly recommended to members of the Society. It is fairly priced (the members price is also at a discount) and will give those who buy it great pleasure in its use.

C.M. Lovatt.

REQUESTS FOR INFORMATION

STATUS AND DISTRIBUTION OF HIPPO AND PIGS IN KENYA

I.U.C.N. Specialist Groups require information on the status of Hippo and the three species of Pigs in Kenya.

I am attempting to gather and collate information and would be glad to receive notes on any recent sightings , within the past ten years anywhere in Kenya, and of the animals particularly as follows:

HIPPO Shores of Lake Victoria, Uganda to Tanzanian border. Any of the rivers entering the lake. If resident or visitor to any of the larger dams or small natural lakes and swamps on private land.

GIANT FOREST HOG *Hylochoerus meinertzhageni* Anywhere; family size.

BUSH PIG *Potamochoerus larvatus* (= koiropotamus) Anywhere family size, any known burrows or dens.

WART HOG *Phacochoerus aethiopicus* Anywhere but particularly Coastal hinterland and the densely populated area Kisii to Tanznaian border.

Please give, if possible, the locality as accurately as recalled, date and numbers seen and if with young.

Thank you, your contribution will be most welcome.

G.R. Cunningham - van Someren, Box 24947, Karen, Nairobi.

I would be very grateful if anyone could give me the location of any active burrows in the Karen or Langata area of any of the following:

PORCUPINE
WARTHOG
AARDVARK
SPRING HARE

The purpose of this request is that I am interested in the flies (Diptera: Calliphoridae) whose larvae feed on the blood of the inhabitant of the burrow; the ticks are also of great interest. I would like to find the larvae and try to associate them with the adult flies, and to their host.

Any localities received will be treated in confidence and perhaps Dr van Someren may also be grateful for this information for his survey on the status of 'pigs' for IUCN.

C.F. Dewhurst, P.O. Box 30023, Nairobi Tel: 882513

Apologies for the very late appearance of this Bulletin -
This was due to the Christmas rush etc! Ed.

MEMBERSHIP:
This offers you free entry to the National Museum, Nairobi; free lectures, films, slide shows or discussions every month in Nairobi; field trips and camps led by experienced naturalists; free use of the Joint Society-National Museum Library (postal borrowing is possible); a copy of the EANHS BULLETIN every four months and a copy of each Journal published during your period of membership. The Society organises the ringing of birds in eastern Africa and welcomes new ringers. It also runs an active Nest Record Scheme. Membership rates are given below.

JOURNAL:
The Society publishes the Journal of the East Africa Natural History Society and National Museum. Each issue consists of one paper; sometimes two or more short papers may be combined to form one number. Several may be published during one year. Contributions, typed in double spacing on one side of the paper, with wide margins, should be sent to the Secretary, P.O. Box 44486, Nairobi, Kenya. Authors receive twenty-five copies of their article free.

EANHS BULLETIN:
This is a printed magazine issued four times a year, which exists for the rapid publication of short notes, articles, letters and reviews. Contributions, which may be written in clear handwriting or typed, should be sent to The Editor (EANHS BULLETIN), P.O. Box 44486, Nairobi, Kenya. Line drawings will be considered if they add to the value of the article. Photographs can be published.

SCOPUS:
The Ornithological Sub-Committee publishes this bird journal five times a year, cost Kshs. 100 per annum. All correspondence to D.A. Turner, P.O. Box 48019, Nairobi, Kenya.

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Subscriptions are due by 1 January. From July you may join for Kshs 50 and receive publications from that date. Application forms for membership are obtainable from the Secretary, P.O. Box 44486, Nairobi, Kenya.

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